

**Pennsylvania
Economy League**

State Office



**The Effectiveness of Economic
Development Programs:
A Review of the Literature and Opinion
Volume I**

October 2000

Table of Contents

INTRODUCTION 1

THE STATE OF THE LITERATURE 2

INFLUENCE OF PUBLIC SERVICES AND INFRASTRUCTURE..... 9

REVIEW OF THE NON-TAX LITERATURE..... 10

IMPLICATIONS FOR ECONOMIC DEVELOPMENT POLICY IN PENNSYLVANIA..... 12

CONCLUSION 13

REFERENCES..... 15

Introduction

There is a continuing dispute among policy makers at all levels of government concerning the allocation of resources for economic development programs versus the benefits received. On one side of the argument, there is concern that resources devoted to these programs provide little overall economic gain and deprive social and other government programs of needed funding. A more positive outlook recognizes the potential for positive economic and social benefits from the right kinds of economic development investments, while a nearly opposite view suggests that the economy would be better served if economic and community development programs that benefit a few were eliminated in favor of lower taxes for all. Very often, the debate at all levels of government fails to result in effective policy because of a lack of complete information on or measures of the true benefits of specific programs. This analysis seeks answers to many of the questions fueling the debate through an extensive search of the literature and studies that are directed, at least in part, to these issues.

A significant body of research and analysis dating back many years attempts to gauge the efficacy of economic development policies in achieving the goals typically attributed to them. PEL examined approximately 30 of those studies generally considered to be the most relevant, recent works on the topic. While our goal was to determine the present consensus among experts on the value of economic development activities, the very volume of work suggests that expert conclusions are too numerous and broad to provide a single authoritative opinion. The literature does, however, provide a number of areas of general agreement as well as a host of issues worthy of consideration in judging the relative merits of one economic development activity or another.

The literature we reviewed included the results of single research projects, meta-analyses of groups of empirical studies, and theoretical cases for or against various policies. In addition, less academic offerings highlighted a number of important issues on all sides of the debate. For the purposes of this review, we focused primarily on the literature reviews and meta-analyses as they provide the most efficient access to extensive research.

The empirical research considered here represents a broad array of design elements. Studies differ in terms of methodology, measures of economic growth, data sources, time periods analyzed, geographic scope, and non-tax variables included as possible influences on economic growth. Methodologies encompass econometric models, hypothetical firm models, case studies, and surveys of individuals who make location and investment decisions. Measures of economic growth might include the number of new jobs created, increased capital investment, or improved productivity rates. Some studies are confined to economic development effects within the boundaries of a state, region, or metropolitan area while others seek to determine the national implications of economic competition between the states.

The vast majority of research is confined to the effects of state and local tax policy on economic development. The “tax literature” encompasses tax levels, general tax and

fiscal incentives, and to a much lesser extent targeted tax incentives. This is a very small area of inquiry, which does not, as yet, yield any meaningful conclusions.

The State of the Literature

Tax literature is a term economists have used to describe the body of research that investigates the effects both of general tax levels and specific tax incentives on the pace of economic growth. Tax levels and tax incentives are frequently considered together because they both directly impact business costs. In addition, because there is more research devoted to the impact of general tax levels, out of necessity they are generally accepted as a proxy for many tax-based economic development programs. Research available on tax incentives encompasses many types of traditional financial incentives such as industrial revenue bonds, property tax abatements, direct state loans, provision of land at or below market value, and enterprise zones.

In this section, we consider the results of research into tax levels and general tax incentives first. Then, because targeted tax incentives raise a different set of issues and objections, we treat that literature separately.

TAX LEVELS AND GENERAL TAX INCENTIVES

While researchers continue to debate or deny the relative value of tax policy as an economic development tool, most acknowledge that recent research constitutes a growing body of evidence that state and local tax policies can influence economic development. Robert Lynch (1996a) notes that “pre-1980 studies (of tax cuts and tax expenditures) are negative across the board, while post-1980 studies, specifically Bartik, find a small but statistically significant correlation between tax cuts and job growth.” Tannenwald et. al. (1997) agrees that “contrary to the conventional wisdom of the 1960s and 1970s, policies by subnational governments do affect the pace of economic development.” Fisher and Peters (1997) suggest why this might be the case, writing that “while no definite conclusions can be reached on the basis of extant literature, there is a growing consensus that the most recent studies, employing more detailed data sets and more refined econometric techniques, have generated results which cast some doubt on the received conclusion that tax effects are generally negligible.”

The shift in academic thinking centers on the work of Upjohn Institute economist Timothy Bartik and two particularly influential studies. Bartik (1992) published the results of a literature review that included analysis of every study published since 1979 on the relationship between state and local taxes and the economy. It is generally considered to be among the most comprehensive analyses of a broad body of work and apparently the proposition to which much of the subsequent literature responds.

Bartik concluded that the sum of the research supports the impact of tax levels on the economy, and he quantified the degree of potential impact. He determined that the long run elasticity of business activity with respect to state and local taxes ranges from $-.10$ and $-.60$ for studies focusing on intermetropolitan or interstate business economic

activity. In other words, if a state or locality reduces its business taxes by 10%, without changing its public services and without other jurisdictions changing their fiscal policies, business activity will increase anywhere from 1% to 6%. For intrametropolitan areas, the range narrows to a 1% to 3% increase for every 10% decrease in taxes.

In subsequent analyses based on a review of the literature as well as additional primary research, Bartik (1991) extended his inquiry to the impact of economic development policies. He again argues that economic development policies can significantly affect economic growth. More importantly, he concludes that to the extent that tax incentives are utilized in high unemployment areas, they tend to result in net long-term benefits in terms of employment and wage levels. He does not find the same beneficial effects for incentives utilized in low unemployment areas.

In addition to generating considerable debate, Bartik's work prompted a number of significant follow-up studies. In a 1995 study, Phillips and Goss applied the meta-analysis technique to the same group of studies Bartik had analyzed and produced very similar conclusions with a wider range of elasticities. Wayslenko (1997) reviewed a somewhat broader group of studies. He also found statistically significant elasticity estimates between tax levels and business activity but in a much narrower range than the findings above, and he is less convinced of the substantial effects of state and local tax levels. He attributes Bartik's wider range of tax elasticities to variations in data, time periods, geography and other variables. He does not, however, dismiss the role of tax levels in economic development, suggesting that a state's tax burden will affect economic activity to the degree it deviates from that in relevant comparison states.

Based on this assessment, tax reductions in Pennsylvania would have a positive impact on economic activity in the state. PEL's study, "A Comparative Analysis of Major State Business Taxes in Pennsylvania" found the Commonwealth to have one of the highest business tax burdens in the nation, significantly above the "average" state.

While Bartik's work seems to have changed the nature of the debate on the importance of tax policies, it by no means convinced everyone. There are numerous critiques of his findings that merit attention in this discussion including some qualifications from Bartik himself. Some of the more common points of debate are reviewed below.

In order for an economic development program to be cost effective, whether it is a tax cut or direct assistance to business, the long-term economic benefit must exceed government expenditures and/or the amount of foregone tax revenue. The most frequently cited objection to economic development activities is that they do not meet this test. Most of the arguments we reviewed were theoretically rather than empirically based, however, probably because it is difficult to establish a cause and effect relationship for many economic development activities.

When quantified, success or failure is frequently measured as the direct cost of an economic development program per job created. Bartik (1991) provides a range of average costs per job and readily concedes that the price may be too high. He

estimates that the annual average cost of a business tax reduction strategy per job created ranges from \$2,000 to \$11,000 (1989 dollars). He defines this range as “expensive, but may be worth it” to “much too expensive” depending on the location. He also notes that economic development incentive programs are more likely to pass a benefit cost test if 1) local unemployment is high, so new jobs are needed by local residents; 2) the jobs pay well relative to the skills required; and 3) many of the jobs go to local residents.

Large tax incentive packages used to lure high profile economic development projects are also particularly prone to cost per job comparisons both because competition between states has dramatically increased the cost of some of these packages and because it is a simple calculation. This analysis is invariably offered as proof that these economic development deals are not cost effective, but it does not generally account for more subtle economic effects such as increased infrastructure demands or a broader tax base. Lynch (1996a) offers a practical objection to tax cutting as a development tool. In response to Bartik’s estimates of increased business activity as a result of a 10% business tax cut, he writes, “Realistically, politicians cannot pass tax cuts that are large enough to make a significant difference.”

It should be noted that reliance on a cost per job created measure was very relevant at the time many of these studies were conducted. However, the changing make-up and globalization of the economy combined with actual labor shortages in certain occupations and geographical regions, has shifted the focus to other desired outcomes. Therefore, the evaluation of the effectiveness of today’s tax and other incentives is best done in this new context.

A subset of the economic development literature addresses the criteria that affect business location and expansion decisions. While many of the factors identified as influential are beyond the scope of government, this body of work also sheds some light on the relative importance of tax levels and tax incentives on business locational behavior. The literature also addresses the impact of other potentially major location determinants which state and local government can influence. They include wages, unions, environmental regulation, and capital market imperfections. These are, however, outside the scope of this study.

Most business location research relies on surveys of business to discover the relative importance of various criteria influencing location, expansion, and investment. The role of tax levels and incentives has been a question of some interest in this work. Historically, taxes were considered too small a business cost to influence location decisions. However, while pre-1980 survey literature is generally negative with respect to the importance of tax levels in location decisions, post-1980 work is more likely to find that taxes play some role in investment decisions. Wayslenko’s (1991) survey of the literature on interregional business location decisions states that “given [recent empirical evidence], it is increasingly difficult to argue that business climate, however broadly defined, does not influence interregional firm locations.” Blair and Premus’ (1987) literature review states that “until recently, the conventional wisdom has been that taxes

Literature Review

– and by implication, other fiscal variables – to not deter industrial locations or economic growth. However, most recent studies show tax-expenditure variables to be important.” Nevertheless, these conclusions remain controversial as demonstrated below.

Two fairly recent literature reviews, Lynch (1996a,b) and Kusmin (1994), find little evidence that the level of state and local taxation figures prominently in business location decisions. Lynch, in particular, stresses that there is no evidence that state and local tax cuts, when paid for by reducing public services, stimulate economic activity or create jobs. Moreover, state and local tax incentives and financial inducements are not the only or even the primary influences on business investment decisions.

Negative conclusions are at least equally balanced by a significant number of studies which find in favor of tax levels affecting location decisions. Some of the more prominent are described below.

- Bartik’s (1991) more complete review of recent literature finds generally more positive results for the influence of taxes based on the survey design. Taxes loom larger in surveys that inquire about desirable location factors rather than “must” factors, and those that focus on reasons for choosing a specific community within a state after the choice of states has been made.
- Schmenner’s (1982) survey of Fortune 500 companies found that only one percent listed taxes as a “must” factor for firms selecting a geographical region and a state for a new branch plant, but 35 percent listed low taxes as desirable if available.
- Premus’s (1982) survey of high tech companies found that 67 percent listed taxes as significant or very significant in influencing state growth decisions.
- Walker and Greentreet’s (1989) survey of new Appalachian manufacturing plants found that of the plants offered tax and other financial incentives, 37 percent stated that these incentives were decisive in their final location decisions.
- Rubin’s (1991) survey of New Jersey firms receiving enterprise zone tax incentives found that 32 percent reported that these incentives were their primary or only reason to locate or expand their business in the zone.

Those studies that find a positive connection between tax levels and business location decisions rarely present tax issues as the only or even among the most important considerations in the site selection process. Rather, they highlight the role tax levels do play at certain points of the process of elimination that occurs in site selection.

Additional anecdotal evidence confirms these findings. Based on the experience of Fantus Consulting, a nationally known site selection firm, Robert Ady (1997) finds that taxes are not relatively important when compared with other cost factors such as labor, transportation, and utility and occupancy costs. However, tax levels and incentive packages play a role in site selection early in the process when there are numerous competing locations. At this point, tax levels can be a disqualifying factor if they are out of line with competing locations. Late in the process, as appropriate sites are narrowed

down to a handful of similar locations, tax levels and tax incentive packages can become a deciding factor.

TARGETED TAX INCENTIVES

Targeted tax incentives are state level programs or laws which provide preferential treatment to a single company or a limited number of companies offered as encouragement to a business to locate, expand, or remain in the state. These incentives might include property tax abatements, sales and use tax exemptions, job and investment credits, accelerated depreciation deductions, and financial aid in the form of tax exempt bonds to loan guarantees, or a combination.

Competition between states and localities for economic opportunities and jobs, and particularly competition using targeted tax incentives, has attracted a great deal of interest in recent years. The debate centers on the value of these incentives and incentive packages for the economic health of the states, and the effects of escalating competition between the states for the nation as a whole. The public discussion includes more economic development practitioners, policy makers and analysts than economists and relies more heavily on theoretical rather than empirical evidence. Though the debate is less academic than those previously reviewed, it highlights a variety of considerations relevant to the use of targeted and non-targeted economic development incentives.

While competition between the states is the target of extensive criticism, most commentators do not oppose competition when it takes the form of tax and spend policy. There is widespread agreement with the gist of Charles M. Tiebout's 1956 argument that competition through tax and spend policies to attract people and business produces the right amount of public goods. The competition creates a balance between public goods and public expenditures because people can and do vote with their feet and choose to live in the community that provides them with the public services for which they are willing to pay.

On the other hand, competition based on preferential treatment for a particular business draws strong objections from a number of perspectives, many of them outlined below. Cost versus benefits is again a major objection to targeted incentives particularly as high profile projects have increased dramatically in cost per job according to a number of frequently cited examples. For example, in 1980, Tennessee lured a new Nissan plant at a public cost of about \$11,000 per job created. The cost per job rose to about \$26,000 in 1984 when Tennessee offered General Motors an incentive package designed to lure a Saturn plant to the state. In 1992, South Carolina offered BMW a package worth \$89,000 per job and in 1993 Alabama topped that deal with an incentive package for Mercedes-Benz worth more than \$150,000 per expected job.

One should exert caution in citing these numbers. A more exacting and fairer analysis would probably reveal smaller numbers. For example, many of these assistance packages include low interest loans. While the face amount of the loan is considered assistance, the actual cost is the interest subsidy of the loan since the principal will be

repaid. Also, many of these deals are completed with the expectation that the real economic gain will be in the satellite employers attracted by the mother facility, further lowering the actual cost to the economic development entity.

Critics argue that expensive packages cost more than any realized benefit in the long term and they do not in fact influence business location decisions. This argument is supported to some extent by the empirical research discussed in the previous section, which does not find a correlation between general incentives and job growth and locational behavior. However, trends in more recent research seem to indicate otherwise, and more than a few researchers have cited the lack of inquiry into large one-time economic development deals. In addition, even some critics recognize that because site location is a process of elimination, when the choice has reached the state of comparing locations with similar costs and amenities, an incentive package may very well make the difference.

There is certainly more evidence for the argument that the winner of a bidding war may not receive all of the benefits expected. In practice, states do not have perfect information about the companies they are courting, and do not necessarily have a complete grasp on a company's willingness to move, how long they are likely to be in business, and how much tax revenue they will produce. Because they do not have perfect information, states are likely, on average, to end up with fewer jobs and tax revenues than they had anticipated. There are numerous and often-cited examples of this disappointing scenario.

Incomplete information also raises the risk that a state or locality will provide incentives for projects that would have occurred without a tax break or other incentive. According to Lynch (1996b) most governments rely on incentive-seeking firms to tell them whether incentives are necessary. Furthermore, he cites data indicating that most incentive-targeted firms would have undertaken their projects without incentives (Lynch, et. al., 1996).

Preferential treatment of a single, often large multi-national corporation or group of firms also raises legitimate objections of inequitable treatment of in-state and smaller firms. Incentives are criticized for giving unfair advantage to large firms with administrative capabilities to negotiate the "best" deal with governments. Furthermore, they serve only a small portion of the firms that need tax and regulatory relief, and they may in fact penalize existing businesses and labor by increasing their taxes to subsidize relocating firms. Depending on the type of business that is recruited, existing firms may face subsidized competitors or they may suffer as a result of wage inflation or competition for existing labor. That competition may affect long-term growth by suppressing business growth.

Beyond concern for the effects of incentives on state level economies, is the belief that competition between states results in a zero sum game, if not a negative sum game, for the nation as a whole. Opponents reason that competition simply moves jobs from one location to another and, on a national scale, the benefits that one state may accrue are

balanced by the negative impact on the losing state without expanding the economic pie. An extension of this argument supposes that relocation represents a potential loss of efficiency to the overall economy because generous incentive packages may induce businesses to locate in an area that will eventually provide less return for their investment than another location. This final point seems unlikely because survey research demonstrates that subsidies come into play only after the location process has narrowed the field based on more important criteria like labor market, transportation, and infrastructure needs.

Finally, market-based arguments against both general and targeted incentives focus on the fact that incentives remove capital from more profitable uses in the private sector, subsidize inefficient projects that would not survive on their own, are prone to political pressure, and are not likely to generate competitive returns because they are not subject to the discipline of the market.

There is no debate without an opposing viewpoint and there are indeed those who make a case for targeted incentives as economic development tools, though most focus only on the national impact of state competition. For example, Bartik (1991) presents more than one case for the national benefits of state and local competition for jobs, with the caveat that empirical evidence for or against this argument is sparse and much of his point rests on logic.

Building on his conclusion that economic development policy is more likely to be effective when pursued in areas of high unemployment, Bartik argues that even if competition does not impact overall national job growth, simply redistributing jobs can result in a net national benefit. If the area that enjoys increased job growth has a higher than average unemployment rate, the benefits of reducing unemployment in that local area are likely to exceed the costs that result from increasing unemployment in other areas. If, on the other hand, the jobs shift to an area with a lower than average unemployment rate, the benefits of reducing unemployment in the local area are likely to fall short of the costs from increasing unemployment in other areas.

Bartik also recognizes the possibility that competition for economic development can yield net national benefits. He argues that if the most aggressive policies are pursued by depressed areas that need growth the most, competition geographically redistributes economic activity toward depressed areas, which is economically efficient. In such a case, new jobs go to individuals who desperately need work and would not have such an opportunity otherwise, whereas individuals in low unemployment areas can generally obtain a job without growth. Additionally, declining areas often have unused infrastructure and reallocating growth from booming to declining areas allows greater use of existing infrastructure and less spending on new infrastructure that growth in a booming area would require.

Toft (1996) follows Bartik's train of thought in arguing that competition is not a zero sum game because the same investment will have different results in different locations. He writes, "Unique interfirm dependencies and rivalries can, according to cluster strategists,

upgrade economic vitality and competitiveness. The very same investment can have widely different economic multipliers – that is, different indirect effects in terms of supplier/buyer relationships among local/regional firms, different demands for local consumer goods and public services, and different stimuli upon economic activity such as employment of disadvantaged workers.”

Mattey and Spiegel (1996) also view tax competition as a positive means to nurture industry clusters. And, in response to criticism that tax breaks are offered to the most mobile producers rather than the relatively captive producers, the authors respond that firm mobility is determined by the timing of fixed investments. Most firms are mobile prior to locating production facilities, but start-up of operations often requires substantial capital investment, which renders the firm fairly immobile until that capital investment has depreciated. “Thus, tax competition should be viewed as yielding an advantage to investing in and operating new physical capital over paying employees to maintain older, less efficient physical capital.”

Influence of Public Services and Infrastructure

A fair amount of research is also dedicated to the relationship between public services and infrastructure and economic growth. The value of public infrastructure as a development tool is often considered along with tax levels because tax cuts or incentives may well be financed by reduced services and infrastructure spending. If public services do significantly impact economic growth, then the benefits of a tax cut or incentive program must be weighed against the negative affects of a reduction in public spending.

There is in fact a good deal of empirical evidence that public infrastructure plays a role in increased business investment, job creation and economic growth. Points of debate focus instead on the right balance between tax spending versus public spending and on identifying the types of public investments that provide the greatest return.

Various surveys of the literature make the point. For example, among the studies Bartik (1991) reviewed, a significant number examined the effects of state and local services on growth and found a positive relationship. Spending for education and infrastructure were most consistently, positively correlated with growth. As a result, Bartik concludes that business tax reductions financed by cutting education and infrastructure spending or any other services that business values will probably destroy jobs.

A number of studies suggest that tax cuts paid for by reducing welfare spending, which are transfer payments, rather than public services, may promote economic growth and help create jobs. This may be impractical for policy makers, however, as welfare payments are traditionally only a small portion of states’ budgets and growing smaller as a result of federal welfare reform.

A subset of this research moves beyond examining the economic benefits of public infrastructure spending to consider the impact of raising taxes to pay for additional

public services. Many of these inquiries found a positive correlation, with the best known described below.

- Helms (1985) found that increases in state and local taxes used to increase public spending in health, highways, schools or higher education, caused growth in state personal income.
- Bartik (1989) found that increases in state and local taxes increased the rate of small business creation if additional tax revenues were spent on local school and fire protection.
- Munell (1990) found that increases in state and local taxes used to finance improvements in highways, sewerage, and other infrastructure increased the growth rate of private employment.
- Bartik (1996) found that increases in higher education and health spending financed by property tax increases would boost state manufacturing output in the long run. On the other hand, increase in spending on roads, financed by non-property tax increases would reduce manufacturing output in the long run. All other increases in state public services financed by tax increases had little net effect on the state's economic performance.

Review of the Non-Tax Literature

Non-tax based incentives traditionally include government services which affect the cost and ease of doing business though perhaps not as directly as a cash-based incentive. Examples might include customized industrial training, help with regulatory problems, or expedited provision of site specific infrastructure.

As noted previously, research into non-tax based fiscal incentives is limited and inconclusive. Nevertheless, Bartik (1991) makes a theoretical case for the likely value of a group of loosely similar policies which he calls "new wave" programs. Unlike traditional branch plant recruitment efforts, which focus on job creation, new wave policies provide services and knowledge rather than cash in an effort to increase private sector productivity through innovation and value-added processes. While Bartik stresses that there is little research available on the effectiveness of "new wave" programs, he argues that they can influence economic growth based on the fact the current research suggests that state and local policies can change the economic climate enough to affect growth.

Bartik (1994) follows on this argument with empirical evidence in favor of "new wave" policies. While the results of the handful of studies described below are not conclusive, they are encouraging.

Several studies provide evidence that industrial extension services and small business development centers can be helpful. They also suggest, according to Bartik, that business information programs are more effective when they are locally run, with extensive business involvement.

Literature Review

- A survey of business clients of Ohio's Edison Technology Center Program found that one-third of the businesses believed that assistance from the Edison Program had helped them to increase sales, profits, market share, or employment (Mt. Auburn Associates, 1992).
- A survey of business clients of Pennsylvania's Industrial Resource Center program found that 20 percent of the businesses reported increased revenue because of the program, and almost half reported cost reductions due to the program (KPMG Peat Marwick, 1993).
- A survey of clients of Oregon's Small Business Development Center program found that one-fourth believed that the program had greatly increased their profits (Public Policy Associates, 1992).

Another recent study suggests that entrepreneurial training can significantly increase the rate at which potential entrepreneurs start up new businesses. The U.S. Department of Labor sponsored experiments in the states of Washington and Massachusetts in entrepreneurial training for unemployment insurance (UI) recipients. In these experiments, UI recipients interested in entrepreneurship were randomly assigned to treatment groups, which received training or control groups, which received none. In Massachusetts, 47 percent of the treatment group entered self-employment compared to 29 percent of the controls. In Washington, 52 percent of the treatment group entered self-employment compared to 27 percent of the controls (Benus, Wood, and Grover, 1994).

Research by Holzer, et. al. (1993) indicates that customized job training assistance can improve business productivity. The group evaluated Michigan's industrial training grant program by comparing firms that received training grants on a first-come-first-served basis to firms that applied too late for a grant. The study found that firms receiving grants did more job training afterwards than nongrantees. In addition, product scappage rates declined more among grantees, enough in fact that the training seemed cost effective.

In addition to evidence of the local or regional benefits of new wave policies, Bartik (1991) also sees the potential for national benefits when the value in greater productivity exceeds to cost to provide the knowledge. In order for this to be the case, private information and training markets must have operated imperfectly prior to government intervention, and thus impeded productivity. For example, small business, or small and medium-sized businesses may not know enough about their options in technology, worker training and exporting.

Implications for Economic Development Policy in Pennsylvania

The literature search described above draws its conclusions from research across a variety of jurisdictions that may not specifically represent Pennsylvania's situation. However, these findings do have implications for Pennsylvania's economic development efforts and programs as they are administered today. They are as follows:

- The research supports the contention that overall tax levels do matter. The research also suggests that lowering tax levels will result in increased economic activity. The magnitude of expansion is debatable, however, particularly for smaller firms which do not always benefit from business tax cuts to the same extent as larger taxpayers. Comparative tax levels are of particular importance for areas or states that are far outside the norm – a position currently occupied by Pennsylvania based on previous PEL research. Therefore, Pennsylvania's ongoing efforts to become more tax competitive should result in higher levels of economic activity.
- The research is ambiguous at best when evaluating the effectiveness of special tax incentives. However, Pennsylvania uses targeted tax incentives to a minimal extent, at least at the state level. The Commonwealth employs only two economic development related tax credits: the Job Creation Tax Credit and the Research and Development Tax Credit. Other tax credits target distressed areas and are not intended to be a broad-based incentive for business attraction and expansion in the traditional sense. Therefore, Pennsylvania's "exposure" to tax credits appears to be much less than most other states. Because the business development benefits of tax credits are not clear, the expansion of existing tax credits or the addition of new credits should be carefully considered before final enactment. Full and appropriate measurement of the existing tax credits should be the first step.
- The research supports the provision of adequate business-related service levels and basic infrastructure, and suggests that, in certain circumstances, higher taxes, if spent on these services, will result in the new economic activity. An examination of Pennsylvania's economic development incentives reveals most of Pennsylvania's incentives are directed to improving service levels for business. The 1999-00 Budget allocates nearly \$120 million in economic incentives for various types of services and infrastructure, investments that will remain in Pennsylvania with or without the business entity initially benefiting from them.
- The research notes the advent of "new wave" economic development programs in Pennsylvania and other states. The purpose and targets of these new incentives differ dramatically from the traditional tax and other incentives. The research on their cost effectiveness is sparse and not conclusive to date. Therefore, Pennsylvania's leadership in this area needs to be evaluated thoroughly. The early evidence indicates some level of success. The results of the latest performance audit of the Ben Franklin Partnership and Industrial

Resource Center programs indicates that these activities are meeting their legislated purpose using acceptable measurements.

Conclusion

William Fox (1997) provides valuable counsel to policy makers confronting the array of research and conclusions discussed above. “First,” he writes, “you certainly want to avoid reading too much into any one piece of research – you want to look for the preponderance of evidence before you conclude anything.” While the work reviewed may provide no indisputable preponderance of evidence in favor or against the efficacy of economic development policies, trends in the most recent research indicate that tax levels and tax incentive programs can indeed influence economic development – that is, to the extent they are designed and executed with proper attention to program goals, cost versus benefits, external effects and numerous other factors that change with the type of incentive, state of the economy, and government jurisdiction.

Each study and meta-analysis gives rise to specific policy prescriptions varying again according to economic, geographic and other factors. There is some agreement from all quarters on very general policy. Most economists and analysts encourage strategic use of tax incentives as part of and in keeping with a broader economic development policy based on sufficient and appropriate infrastructure investment and service provision and a balanced and predictable tax system. Incentives should pass a cost benefit analysis, should be motivated by economic rather than political needs, and fiscal and performance accountability measures should be in place from the beginning. Of course, in order to measure success, program designers must clearly define success by recognizing the ultimate purpose of the program and identifying the goal and objectives that will reach that end.

While economic development research provides valuable incentive-specific information, what it does not cover may well have more important policy implications. Much of the existing research measures the effectiveness of economic development programs, most of them fiscal incentives, designed many years ago to meet the needs of an older industrial economy. Accordingly, the focus of many programs and thus the research studies is on manufacturing and job creation. Our economy has changed dramatically in recent decades. Driven by widespread application of technology, global competition and the resulting necessity for increased productivity, major sectors of the economy are shifting from labor-intensive operations to high value-added processes in order to continue to be competitive. The competitive requirements of a new knowledge-based economy seem to dictate that economic development policies should seek to increase productivity where the market has failed to do so.

In fact, during the past two decades more state and local jurisdictions have increased their offerings of business services designed to increase private sector productivity. These are policies Bartik describes as “new wave” policies, which encourage various forms of innovation such as applied research, industrial modernization, entrepreneurship, and business expansion into export markets. While research on

these types of programs as well as other non-fiscal initiatives is not sufficient to pronounce on their effectiveness, Bartik (1994) cites a number of positive studies described earlier and their use is one of three recommendations included in the same article.

In addition, Bartik's articles stress the importance of measuring the results of all development policies. He writes, "...policy makers and researchers should spend more time thinking about and measuring the *ultimate benefits* of ...economic development policy. Policy makers and researchers need to focus on the benefits of such programs for the unemployed, different groups of workers, the local fiscal situation, and the productivity of the economy." Because the research is silent on many types of economic development activities and at times contradictory on tax and other fiscally based incentives, this is perhaps the most important conclusion suggested by the preceding literature review, and of course, the subject of the companion volume to this study.

References

- Ady, Robert. 1997. "Taxation and Economic Development: The State of the Economic Literature (Discussion)." *New England Economic Review*, Federal Reserve Bank of Boston, March/April.
- Bartik, Timothy J. 1989. "Small Business Start-Ups in the United States: Estimates of the Effects of Characteristics of the States." *Southern Economic Journal*, April.
- _____. 1991. *Who Benefits From State and Local Economic Development Policies?* Kalamazoo, Mich.: W.E. Upjohn Institute for Employment Research.
- _____. 1992. "The Effects of State and Local Taxes on Economic Development: A Review of the Recent Research." *Economic Development Quarterly*, Vol. 6, No. 1, February.
- _____. 1994. "Jobs, Productivity, and Local Economic Development: What Implications Does Economic Research Have for the Role of Government?" *National Tax Journal*, December.
- _____. 1996. "Growing State Economies: How Taxes and Public Services Affect Private Sector Performance." Washington, DC: Economic Policy Institute.
- Blair, John P. and Robert Premus. 1987. "Major Features in Industrial Location: A Review." *Economic Development Quarterly*, Vol. 1, No. 1, February.
- Fisher, Peter S. and Alan H. Peters. 1997. "Tax and Spending Incentives and Enterprise Zones." *New England Economic Review*, Federal Reserve Bank of Boston, March/April.
- Fox, William F. 1997. "Policy Implications: A Panel Discussion." *New England Economic Review*, Federal Reserve Bank of Boston, March/April.
- Helms, Jay. 1985. "The Effects of State and Local Taxes on Economic Growth: A Time Series Cross Section Approach." *The Review of Economics and Statistics*, February.
- Holzer, Harry J., Richard N. Block, and Marcus Cheatham. 1993. "Are Training Subsidies for Firms Effective? The Michigan Experience." *Industrial and Labor Relations Review*, July.
- Kusmin, Lorin D. 1994. *Factors Associated with the Growth of Local and Regional Economies: A Review of Selected Empirical Literature*. Washington, DC: US Department of Agriculture, Economic Research Service.

Literature Review

- Lynch, Robert G. 1996a. "The Effectiveness of State and Local Tax Cuts and Incentives, A Review of the Literature." *State Tax Notes*, September.
- Lynch, Robert G. 1996b. "Do State and Local Tax Incentives Work?" Washington: Economic Policy Institute.
- Lynch, Robert G., G. Fishgold, and D. Blackwood. 1996. "The Effectiveness of Firm-Specific Tax Incentives in Promoting Economic Development: Evidence From New York's Industrial Development Agencies." *Economic Development Quarterly*, Vol. 10, February.
- Mattey, Joe and Mark Spiegel. 1996. "On the Efficiency Effects of Tax Competition for Firms." *The Region*, Federal Reserve Bank of Minneapolis, June.
- Munnell, Alicia. 1990. "How Does Public Infrastructure Affect Regional Economic Performance?" *New England Economic Review*, Federal Reserve Bank of Boston, September/October.
- Pennsylvania Economy League. 1999. "A Comparative Analysis of Major State Business Taxes in Pennsylvania." Harrisburg.
- Phillips, Joseph M. and Ernest P. Goss. 1995. "The Effect of State and Local Taxes on Economic Development: A Meta-Analysis." *Southern Economic Journal*, October.
- Premus, Robert. 1982. "Location of High Technology Firms and Regional Economic Development." A staff study prepared for use by the Subcommittee on Monetary and Fiscal Policy of the Joint Economic Committee, Congress of the United States, June.
- Rubin, Marilyn Marks. 1991. "Urban Enterprise Zones in New Jersey: Have They Made a Difference?" In *Enterprise Zones*, ed. Roy E. Green, Newbury Park, Calif: Sage Publications.
- Schmenner, Roger. 1982. *Making Business Location Decisions*. Englewood, NJ: Prentice Hall.
- Tannenwald, Robert, Katherine L. Bradbury, and Yolanda K. Kodrzycki. 1997. "The Effects of State and Local Public Policies on Economic Development: An Overview." *New England Economic Review*, Federal Reserve Bank of Boston, March/April.
- Tiebout, Charles. 1956. "A Pure Theory of Local Expenditures." *Journal of Political Economy*, No. 64.

Literature Review

Toft, Graham S. 1996. "Doing Battle Over the Incentives War: Improve Accountability but Avoid Federal Noncompete Mandates." *The Region*, Federal Reserve Bank of Minneapolis, June.

Walker, Robert and David Greenstreet. 1989. "Public Policy and Job Growth in Manufacturing: An Analysis of Incentive and Assistance Programs." Paper presented at the 36th North American Meetings of the Regional Science Association, Santa Barbara, Calif., November 10-12.

Wayslenko, Michael. 1991. "Empirical Evidence on Interregional Business Location Decisions and the Role of Fiscal Incentives in Economic Development." In *Industry Location and Public Policy*, eds. Harry Herzog and Alan Schlottmann, Knoxville, Tenn: University of Tennessee Press.

Wayslenko, Michael. 1997. "Taxation and Economic Development: The State of the Economic Literature." *New England Economic Review*, Federal Reserve Bank of Boston, March/April.