

Small Business Incubators: A Tool for Economic Development

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This article describes how incubators can help small businesses. It examines and presents examples of four types of facilities in the United States. The author addresses the question of how the effectiveness of incubators can be evaluated and concludes by discussing the North Carolina Incubator Facilities Program.

Small business incubators have been in existence in the United States since the early 1960s, predominantly in the Northeast. A profile of incubators completed by the Hubert Humphrey Institute of Public Affairs (Temali and Campbell, 1984), found that only two of the 30 incubators reviewed opened prior to 1971. The remaining 28 have opened since 1978. In spite of a lack of information on the effectiveness of small business incubators, state and local policymakers increasingly view them as viable economic development tools.¹

Just as an incubator provides a warm and supportive environment for baby chicks to grow and become healthy, a small business incubator provides an environment designed to increase the survival and growth rates of new and young small businesses by providing a combination of below-market rent, flexible space, shared services, management assistance, and access to capital. Incubators often occupy older industrial buildings that have been rehabilitated and subdivided to hold many small firms. The facility "incubates" the firm until it can enter the community as a healthy, growing business. Incubators are based on the idea that firms' chances of success and growth increase if they are provided with the right supportive environment during the critical early period of the business life-cycle. This process provides the community with additional healthy small businesses and a subsequent increase in jobs and incomes.

How Incubators Address the Problems of Small Businesses

Incubators are designed to address four problems which new and young small businesses encounter: (1) inadequate management, marketing, and accounting skills; (2) inability to gain access to adequate amounts of capital; (3) problems associated with space, including poor quality, high cost, and inappropriate size; and (4) problems associated with business services including high cost, poor quality, and unavailability. This section assesses the severity of each

problem for small firms and discusses how incubators solve each of these problems. The information is based on both national information concerning small businesses and a study of incubators and business needs completed by the author.

Management Skills

The major problem facing small businesses is a lack of adequate management skills. According to a 1977 Dun and Bradstreet publication, *The Business Failure Record*, over 90 percent of small businesses fail due to poor management. Poor management is defined as a lack of relevant business experience, lack of managerial experience, and incompetence at running a business. The report goes on to state that almost 55 percent of the firms that failed were less than five years old and 80 percent were ten years old or less. Other studies substantiate the assertion that the major problem of small businesses is inadequate management skills (Dandridge 1970; Kennedy 1976; Said 1977; Stahrl 1979).

Many entrepreneurs who manage young or start-up ventures lack the managerial, marketing and accounting skills needed to make their enterprise successful. In addition, many small business people cannot afford the time or money for management advice and are often reluctant to admit that they may need help. Incubators address these problems in four ways. First, they can work with local educational institutions and business management professionals to provide management education and assistance to owners of incubator firms. Often this assistance takes place on-site, either through classes or individual consultation. Second, an on-site incubator manager, trained in business management, can provide business people with day-to-day management, marketing, and accounting assistance. Third, entrepreneurs in incubators, because of their proximity to each other, have increased opportunities to share advice and solve problems. Fourth, an advisory

board or board of directors composed of local professionals and business people can offer its expertise and advice to tenants of the incubator at a low- or no-cost rate.

Incubators perform two functions that other types of management assistance do not offer. First, the combination of on-site management and tenant interaction provides assistance when and where it is needed. Instead of waiting days, and often weeks, for class sessions or consulting appointments, tenants can resolve problems as they occur. Second, incubators provide an environment in which business people are encouraged in an ongoing process to improve their management skills and practices. Many entrepreneurs feel they are too busy running their establishments to attend a class or engage in business planning. In addition, they may be unaware that they could improve their management skills. The structured environment of the incubator provides an opportunity to spend the time needed to improve management skills.

Access to Capital

A second major problem faced by new and young small businesses is that it is difficult to obtain adequate amounts of debt and equity capital. This inability to secure funds can result in severe undercapitalization, crippling a firm's chances of survival and its ability to expand. By definition, a new business is a risky activity; banks and other institutional lenders are hesitant to provide this type of risky capital to small ventures (Pfeffer 1967; United States Small Business Administration 1984). One study found that banks provide only 2.2 percent of start-up capital for new firms (Kieschnick, 1979). Small businesses also have significant difficulties in equity markets. New businesses are virtually shut out of the stock market (Herzog, 1982) and venture capitalists lend to only a small percentage of firms who usually show strong growth and profit potential and have a strong "track record." Because of these constraints, small enterprises often finance their ventures with savings, second mortgages, and loans from friends and family. As a result, their businesses are often undercapitalized, resulting in higher risks of failure and slower growth.

Incubators can address the problems of small business undercapitalization. Incubators can work with local public business loan programs, which give incubator tenants high priority for loans. Incubator managers can work with tenants and local lenders to increase the availability of loans to firms in the incubator. Lenders may feel that the on-going management assistance and lowered costs in an incubator make firms located there a better credit risk and may be more willing to loan them money. Managers can bring prospective venture capitalists into contact with tenants. The organization developing the incubator can establish its own venture capital fund for financing incubator tenants. When the firm has graduated from the incubator, it can repay its loan at a rate that allows the fund

to be sustainable. Finally, incubator managers can serve as referral agents to help firms apply for government funding, including U.S. Small Business Administration loans and state and local business loan programs.

Space

New and young small businesses face many problems with respect to the space necessary to operate. Industrial and commercial space is often too expensive and inappropriate in size, type, or location. Due to facility constraints, most firms cannot expand on site; as their business grows they incur extra costs and disruptions of repeated moves and renovations.

Incubator facilities can lower the cost of space to their tenants in two ways. Incubators may have access to public subsidies or land and/or building donations that allow the incubator to charge below-market rents. Public subsidies such as the donation of public buildings, property tax waivers, grants, and no interest or below-market rate mortgage loans, all lower the operating costs of an incubator facility. In turn, these savings can be passed on to tenants in the form of lower rent. Privately developed incubator facilities may not be eligible for these public subsidies, forcing them to pay their operating costs with rent revenues. As a result, private facilities usually cannot charge below-market rents. However, private donations of buildings and/or land, long-term below-market leases, and grants can also lower the operating costs of private incubators.

Incubators also lower space costs by taking advantage of economies of scale and shared facilities. A small space costs more per square foot than a large space because of the fixed costs of facilities provided with each space. Moreover, it costs more to divide large spaces into smaller spaces. An incubator does not necessarily need to charge higher rates for smaller spaces because all tenants in the building may share conference rooms, restrooms, reception area, or main office.

Incubators can supply properly located, well designed, and appropriately serviced small spaces for start-up businesses, which are often unavailable in the marketplace. In addition, as new firms grow or contract they may have to move several times, resulting in wasted time and increased expense. Incubators can provide space that allows for expansion and contraction on site. This adaptability lowers operating costs for businesses because they can rent as much space as they need at any given time with the option to expand on site.

Business Services

Small business people can encounter three problems with business services: availability, cost, and quality. If certain business services are not available locally, an incubator can provide them to its tenants. In addition, incuba-

tors can develop referral lists that link providers of quality and specialized technical resources with incubator tenants.

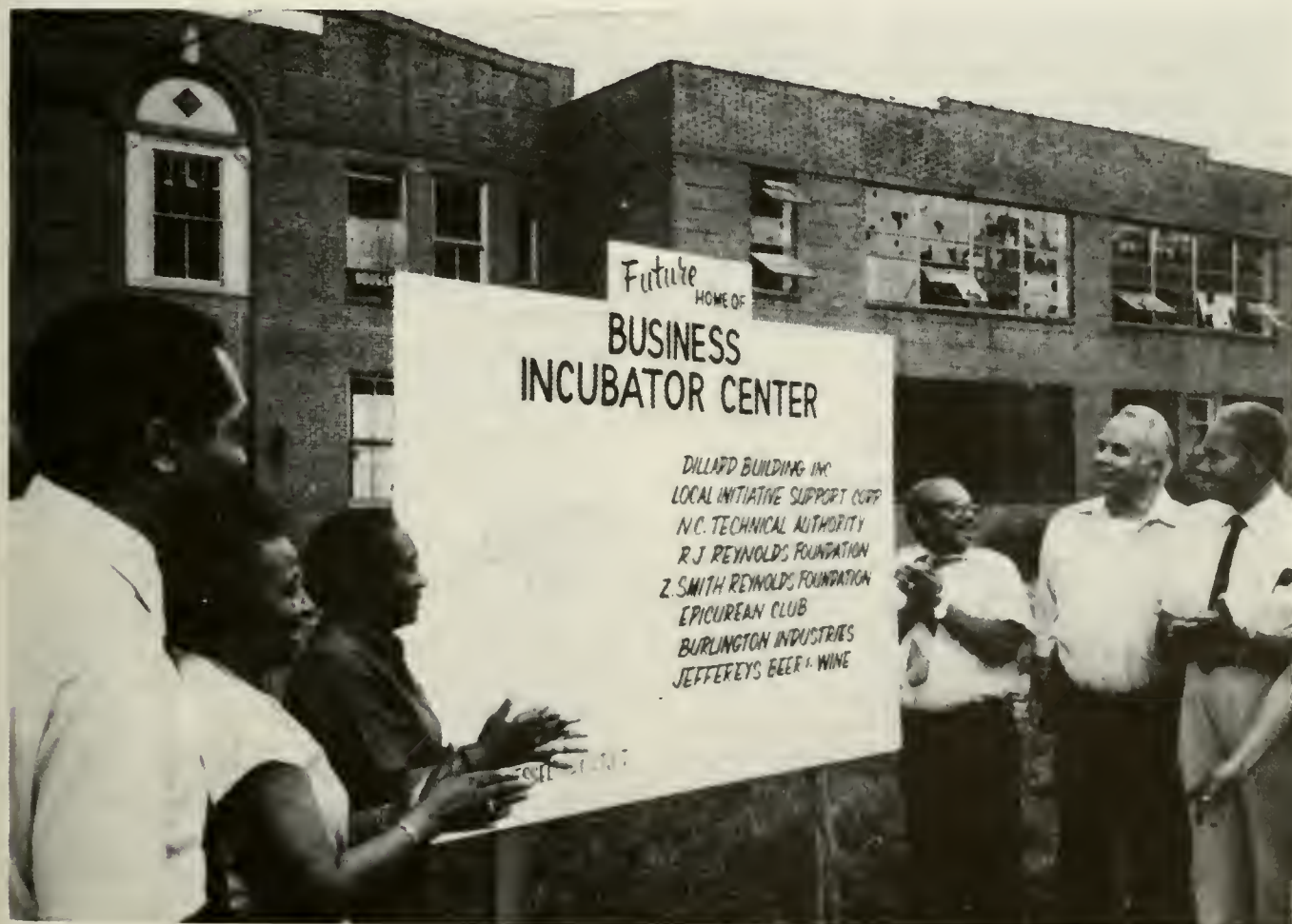
Often the most significant problem business people encounter with services is cost. Many small firms cannot afford marketing consultants or a business computer. Incubators can lower costs by providing services that are shared among the incubator's tenants. For example, an incubator can provide shared equipment, such as a business computer, for which tenants pay on a per use basis. Similarly, tenants can share bookkeeping, satellite or cable communications, copy machines, telephone answering, and clerical help. Other shared services that can contribute to lower costs include a business and technical library, equipment and tools, and janitorial and security services.

Incubators can lower the cost of off-site services such as marketing or legal consultation. They can provide a subsidy for the tenants to be used towards the cost of these services and they can also form a network to provide ser-

vices at a reduced rate to all tenants in the incubator. Further, a board of directors can volunteer its time to provide services to individual tenants.

Types and Examples of Incubators

There are four different types of incubators in the United States: public, private non-profit, academic, and private for-profit. Although there are hybrids of these types, almost all facilities fall into these categories. Public incubators often form part of a state or local economic development program designed to advance specific policy goals. Private non-profit incubators organized by industrial or community development organizations often try to address the problems of certain areas or subpopulations. Academic incubators are organized under the auspices of a specific university to take advantage of its particular research capabilities. The academic incubator usually facilitates the successful development of university research



Neighborhood and community leaders in Goldsboro, North Carolina (population 40,000), celebrate the beginning of renovation work which will convert a 27,000 square-foot abandoned high school from an eyesore into an incubator, expected to bring badly-needed businesses and jobs into the community. The effort is being financed through state and local funds along with donations from private foundations.

into viable business enterprises, and serves as a business laboratory for students and faculty. Private for-profit incubators are owned by private corporations oriented toward economic success. They operate similarly to the other types. This section provides case studies of each of the four types of incubators.

*Local Government-initiated and -run Programs:
The St. Paul, Minnesota, Incubator*

St. Paul, Minnesota, developed its incubator in 1983, as part of its "Homegrown Economy Project," the goal of which is to produce a more self-sufficient and diversified local economy. The city used \$550,000 of its grant funds from the Emergency Jobs Bill to provide a low-interest mortgage to the owner of the building that houses the incubator. In return, the owner leases 20,000 square feet to the SBA 503 development corporation that manages the project. Rents in the incubator portion of the building range from \$2 to \$2.50 per square foot as compared to \$2.50 to \$3.50 for other space in the building. Rents are raised every year for each tenant so that by the third year tenants pay close to local market rates.

The incubator managers initially thought all tenants would need centralized services. However, this was not true: now the incubator provides no shared services. The managing organization and the city's Business Revitalization Department provide both formal and informal management assistance and business financing. Currently, the facility houses seven tenants who provide 32 jobs. These firms include a manufacturer of energy-saving boiler devices, a jewelry manufacturer, and an employment consulting firm.

*Private Non-profit:
The Fulton Carrol Center, Chicago, Illinois*

The Fulton Carrol Center was established by the Industrial Council of Northwest Chicago in 1980. The goals of the project were to revitalize a deteriorating industrial and residential area and to create jobs for the area's low-income residents. The Council used a \$1.7 million U.S. Economic Development Administration grant to purchase and rehabilitate an aged, run-down industrial building. The size of the facility is quite large—340,000 square feet. Rents approximate local market rates at \$1.30 to \$2 per square foot, depending on size and location.

The center provides an array of services, including word processing, phone answering, copying, and health insurance at cost. Access to receptionist services, conference rooms, a library, and a lunchroom are included in the rent. The center employs a full-time, on-site manager who performs a number of duties designed to assist firms. She has become familiar with the businesses, their operations, and their problems and, as a result, can employ timely and knowledgeable intervention when needed. She ex-

plained that many business people are reluctant to seek outside assistance. The advantage of an on-site manager, in her opinion, is that business people will talk to her informally about numerous small, but potentially serious problems before they become insurmountable. Firms can receive more formal management and financial assistance from the Westside Development Corporation, a tenant in the incubator. Most of the Fulton Carrol Center's 24 tenants are light industrial firms, including a furniture maker, metal fabricator, and an exhibit booth producer. The center has been successful at helping firms to interact and cooperate—over 18 businesses buy and sell goods from one another. The incubator firms have created over 150 jobs.

*University Related:
The Rensselaer Polytechnic Institute Incubator (RPI),
Troy, New York*

This incubator was developed by RPI to promote the commercial application of research at the university and to encourage graduates and faculty to start their own technology-related businesses. The 40,000 square foot facility, which opened in 1980, provides a link between the technical and educational resources of the university and the entrepreneurs starting firms. Funding for the facility was provided by a number of sources, including RPI, the City of Troy, the New York State Development Corporation, and industrial development revenue bonds. Rents, at \$6 per square foot, are 60 percent below local market rates. Among the ten tenants are a computer software developer, a high-tech business consultant, and a biochemical reactor developer. These and other firms in the facility have produced an estimated 140 jobs.

RPI's facility provides a comprehensive array of well-used services: reception, telephone answering, bookkeeping, copying, computer rental, conference rooms, jitney, and laboratories. Management and financial assistance include business planning, a \$1,500 stipend for each firm to be used towards purchasing business or technical consultation, and access to business consultants or lawyers at 25 percent below market rates. The incubator manager also provides informal management assistance to firms. The incubator facilitates financing by acting as a broker with traditional lending sources.

*Private For-profit:
Technology Centers International (TCI)*

TCI, founded by Loren Shultz, operates five centers across the nation and plans to open at least six more. TCI's goal is to "promote the development, growth, and success of small, technologically-oriented businesses." The facilities range in size from 20,000 square feet in Montgomeryville, Pennsylvania to 100,000 square feet in Minneapolis. Some are funded entirely by private sources; others have been

funded in part with public monies. The centers generally provide an array of services at market rates including telephone answering, typing, mailing, computer rental, and van and equipment rental.

Each center has a "champion" who is available to help tenants with business and financial planning and marketing. Each center is associated with a local and national venture capital fund set up by TCI. Not all companies in the incubator have access to this fund; only technologically-oriented companies with tremendous growth potential are eligible. Both the champion and TCI often receive a share of ownership in these companies, with TCI receiving a significant portion of the company in exchange for an infusion of equity capital. Among the manufacturing and service sector firms housed by the centers are a print shop, a dance studio, a medical equipment testing company, and light assembly firms.

The Problem of Evaluation

As illustrated above, there are significant differences in the operation, organizational structure, and purposes of incubators. Partly because of this variation and complexity, it is difficult to assess the performance of business incubators. Most are relatively new and have not had time to establish a track record. More importantly, it is difficult to determine how to measure success rates. However, the increase in state and local economic development efforts and the increasing popularity of incubators in recent years as an economic development tool make evaluation imperative. It is important to address the problem of evaluating the effectiveness of incubators in meeting their economic development goals.

Incubators usually point to low vacancy rates, high numbers of graduated firms, and jobs created as indicators of their success. However, these measures are inadequate and can be deceptive. For example, operating with low vacancy rates may be a reflection of below-market rents—they may not be meeting the community's business needs. Similarly, graduation rates for firms, and figures on the number of jobs produced, are incomplete indicators of performance. If an incubator selects tenants that are healthy businesses with high chances of success, they are likely to show low failure rates and high job-generation rates. Conversely, an incubator that selects riskier, less experienced firms, is more likely to provide greater assistance, but may show higher failure rates and lower job generation rates, thus appearing less successful. An incubator is successful only if it assists firms that would have failed more quickly or grown more slowly had they not received assistance. Job creation figures alone do not indicate success since the jobs may have been created even if the firm had not entered the incubator and instead had rented space in the open market.

This assertion is not to suggest that figures on vacancy rates, numbers of firms graduated, and number of jobs

created are not meaningful. Rather, these indicators should be used with caution when evaluating the performance of incubators.

Two alternative criteria for evaluating incubators are: (1) how well firm selection policies fit with effective economic development theory; and (2) how well incubator operations meet local business needs and conditions. Although it is beyond the scope of this paper to determine how these measures are to be operationalized, the following discussion explains why these are useful criteria.

Economic Development Principles and Firm Selection Criteria

The first criterion by which to evaluate firm selection policies is consistency with the goals of the incubator. Incubators vary with respect to their economic development goals. Some are concerned with revitalization of a blighted or depressed area of a city and provision of jobs to a certain group of people; others concentrate on increasing the number of jobs in an entire city or region. The main goal of the St. Paul incubator is to diversify the local economy, create jobs, and increase income in the city by encouraging the growth of manufacturing firms that either increase exports from the region or decrease imports. Because these activities bring dollars in, or reduce the flow of dollars out, they create new jobs.

The Cascade Business Center, located in a low-income, blighted area of Northeast Portland, Oregon, is an example of an incubator attempting to revitalize a blighted area and employ or create business opportunities for area residents. Most of the firms in the Portland incubator are service firms that sell their services in the Portland metropolitan area. Because these firms do not increase exports or reduce imports to Portland, they do not significantly contribute to the economic development of Portland. However, if the importing and exporting region included only Northeast Portland, these firms would contribute to local economic development by decreasing imports and increasing exports.

It is important to distinguish between these two types of incubators when evaluating firm selection policies. An area redevelopment incubator can attain its goals by choosing tenants, such as certain service firms, that transfer jobs and income within the city. If the goal of the incubator is to increase income and net new jobs in the overall area, it will be most successful if it chooses tenants who increase exports or reduce imports from the total city or region the incubator serves. Evidence suggests, however, that many incubators do not use firms' selection criteria which follow this latter model. According to a recent survey of incubators, when asked which firms an incubator would accept as tenants over 40 percent said they would accept wholesale firms and over 20 percent said they would accept retail firms. (Allen and Daugherty, 1988). To the extent that economic development incubators



The town government of Ahoskie, North Carolina (population 5,000), donated this 20,000 square-foot downtown building for conversion into a small business incubator.

choose non-exporting firms such as these, they reduce their effectiveness at creating net new jobs.

A second criterion by which to evaluate firm selection policies is whether the incubator selects firms that would either fail or not expand as quickly without the assistance the incubator provides. In other words, incubators are most effective when they select firms that need assistance. If an incubator selects firms that do not need assistance and are entering the incubator only for reduced rent or cheaper services, then the benefit to the community will be minimized. The distinction between capable firms and those that need help is difficult to determine. It is a distinction that incubators, as well as other economic development assistance programs, should make. Only if this distinction is made will limited resources be put to their best use.

One of the drawbacks of funding private for-profit incubators with public money is that, because they tend to charge higher rates than non-profit incubators and select firms that have a higher likelihood of success, they are less likely to correct a market failure. The public interest component built into public and non-profit incubators, makes them more likely to structure selection policies to correct a market failure by helping firms that would not otherwise survive. Thus, they increase the number of net new jobs in the community.

Operating Guidelines To Meet Business Needs and Local Conditions

Another criterion for evaluating incubators is how well

they help solve problems new and young businesses face. As noted above, the two most common reasons for business failure are a lack of management skills and an inability to obtain adequate amounts of capital. Incubators that address these problems are most likely to provide needed assistance. Hence, the provision of management and capital assistance is a criterion by which incubators can be evaluated. In many instances, incubators that provide only below-market rent and shared services are unlikely to significantly increase the survival rates of businesses because they fail to address the major causes of business failure.

While providing management assistance and access to capital may contribute most to business success, many incubators offer neither of these services. Many incubators offer only below-market rent and a smattering of shared business services. For example, the incubator in Buffalo, New York, was established to encourage new industries to relocate to Buffalo, and only provides reduced rent as an incentive for relocation. Other incubators, including the Bradley-Roper incubator in Rockford, Illinois, and the incubator in Bennington, Vermont, provide no on-site management assistance and only minimal access to external management and capital assistance. Such assistance can be critical to the survival of incubators' firms. In the East End Manufacturing Center in Chester, Pennsylvania, which does not provide management assistance, one growing firm failed and another lost several important contracts because of serious, but correctable, management mistakes. The incubator's manager believed that these two

firms would have been successful if the facility had a mechanism in place to identify and correct business problems before they became serious.² Lack of on-site management and capital assistance limit incubators' ability to have a significant impact on firm survival rates and growth possibilities.

While many small businesses face common problems, local conditions differ affecting decisions whether to establish an incubator, and what problems it should address. The accurate assessment of local needs is essential for determining the feasibility of and need for an incubator. For example, in many cities, especially those facing economic distress, the cost of space is not high. As a result, incubators in these cities may not need to charge reduced rent. Some areas may have unique needs which need to be determined and addressed. For example, the area around the Fulton-Carroll Center in Chicago has a high burglary and vandalism rate. There the incubator was able to adapt to that problem by providing increased security services for firms in the incubator.

It is unlikely that incubators are appropriate for every area. One of the central requirements of an incubator is the existence of an adequate number of people willing and able to start small businesses. In smaller, more isolated communities, this base may not be available—there may not be enough people who have the skills and the desire to enter the incubator with a new business idea.

Evaluating the North Carolina Technological Development Authority Incubator Facilities Program

The previous section discussed conventional and alternative ways of evaluating incubators. This section uses these evaluation types to examine North Carolina's incubator program. North Carolina was one of the first states to set up a state incubator program, with the establishment of the Technological Development Authority (TDA) in 1983. TDA's purpose is to "increase the rate at which new jobs are created in all regions of the state by stimulating the development of new and expanding small businesses."³ Its Incubator Facilities Program (IFP) works to meet that goal by providing funding to local non-profit development corporations to establish and manage incubator facilities. To date, it has provided funds to establish seven incubators throughout the state and it currently has funds to establish four more.

TDA furnishes up to \$200,000 for facility construction, purchase, or renovation costs to non-profit organizations seeking to establish incubators. An additional \$35,000 grant may be awarded to help cover first-year operating costs. The county, city, or non-profit corporation initiating the project must provide matching funds either in cash or real estate.⁴

To date, TDA has helped establish six incubators in Haywood County (1984), McDowell County (1985),

Ahoskie (1985), Goldsboro (1985), Charlotte (1987), and Dunn (1988). A seventh facility in Greensboro is planned. Though most of the incubators are located in the Piedmont region, TDA has an aggressive outreach program to encourage projects from all parts of the state.

Evaluating the Program

As of January 19, 1988, the six North Carolina incubators available for occupancy housed 28 firms, employing 92 people. The occupancy rate of the rentable space ranges from 18 to 100 percent. However, given the recent initiation of many of these projects, job and vacancy rates are likely to underrepresent performance. In addition, as discussed above, vacancy rates and employment figures are incomplete indicators of performance. Other factors, including the type and performance of firms the incubator selects, the types of services provided, and the fit with local conditions are important factors in evaluating effectiveness.

Firm Selection

Incubators will be most successful if they limit the businesses they select to those that contribute to the area's economic base and those that are in need of assistance. TDA's enabling legislation does not limit the types of firms that can occupy an incubator. The local organizations running the incubators have complete freedom over the types of firms they choose as tenants. As a result, TDA cannot require local organizations to choose only those firms that require assistance and contribute to the local economic base. TDA does discourage incubators from accepting tenants that relocate from existing commercial space, on the grounds that these firms are not truly in need of assistance. In addition, they encourage incubator managers to seek out and encourage light manufacturing firms.⁵

Operating Guidelines

As discussed above, provision of management assistance and access to capital appear more important in increasing the rate of small business success than simple provision of low-cost space. TDA requires the incubator management to provide technical and management assistance to tenants, either on-site or through working relations with universities, community colleges, or technical institutes. However, it does not require that management help firms gain access to capital. In addition, making on-site management assistance optional, rather than mandatory, means the incubators are less likely to address major problems facing small businesses.

Fit with Local Conditions

Incubators that address local conditions are the most likely to be considered successful. TDA requires the initiating organization to determine the potential feasibility of

the incubator before receiving funds. This includes determining the availability of a small business support network and the level of entrepreneurial activity in the area. In addition, the organization is encouraged to determine the demand and supply of commercial real estate in the area and the nature of the economic base in the area. These practices appear to increase the likelihood that incubators will fit local conditions.

TDA appears to follow practices with respect to operating guidelines and fit with local conditions that are likely to lead to effective performance. However, TDA may be supporting firms that neither need assistance nor contribute to the economic base of the community or the state because it does not limit the types of firms the incubators may accept. In addition, business success and growth rates may be reduced without a requirement of on-site management assistance.

Conclusion

Incubators are growing in popularity as an economic development tool. They attempt to increase the survival and growth rates of new and young small businesses by helping business people solve problems usually encountered when starting and running a small business. Incubators can address the most important problems small businesses face, i.e., inadequate management skills and difficulty obtaining adequate amounts of capital. Incubators can also assist businesses with problems related to space and business services.

It is extremely difficult to assess the performance of existing incubators due to both their newness and to the difficulty in measuring actual contributions to business success. Functional measures, such as the number of jobs created, do not yield adequate indicators of success. Other more effective indicators that might be employed to assist evaluation of incubator performance include: consistency of firm selection policies with effective economic development principles and operation guidelines that meet the needs of businesses and address local conditions.

Incubators are more likely to be successful in meeting economic development goals if they select tenants who would survive only with the incubator's assistance. If the incubator's goal is to increase income and jobs, it should select firms that increase exports and decrease imports. Incubators can facilitate the survival rate of small businesses by providing effective management assistance and by increasing the availability of capital to the tenant firms. The simple provision of below-market rent and some shared services will not be as effective as providing management and capital assistance. Also, local conditions and needs vary and should be taken into account when designing an incubator. Incubators that follow these policies are likely to be successful at meeting local economic development goals. □

NOTES

1. This paper was initially presented at the New Perspectives in Planning in the West Conference, Tempe, Arizona, April, 1984. The paper is based on the following study of small business incubators and their applicability for Eugene, Oregon: Elizabeth Evans, Robert D. Atkinson and Lance Holmstrom, "Small Business Incubators: A Tool For Local Economic Development," (Community Workshop Project for the City Planning Department of Eugene, Department of Planning, Public Policy, and Management, University of Oregon, 1985). The author wishes to thank Michael Hibbard, Lance Holmstrom, and Helen Liggett for their assistance with and contributions to this paper.
2. Interview with manager of the East End Manufacturing Center, Chester, Pennsylvania, June, 1984.
3. North Carolina's Technological Development Authority's Incubator Facilities Program Request for Proposals: 1987-88.
4. For more information about North Carolina's Incubator Facility Program contact the Technological Development Authority, 430 North Salisbury Street, Raleigh, North Carolina, 27611.
5. Discussion with TDA Staff, March 11, 1988.

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