

## **RURAL REVITALIZATION: ROLE OF AND POLICIES FOR ENTREPRENEURSHIP**

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Rural development policies in the United States have evolved to address the changing composition of rural economies. During the early and middle years of the twentieth century, rural economies were essentially farm dependent. In 1950, more than 30 percent of the rural work force was directly involved in farming (U.S. Department of Agriculture). This produced a degree of similarity in rural areas across the country, facilitating the development of national rural policies. During the 1960s, the strategy of rural industrialization arose to encourage the movement of capital to rural areas as a means of creating employment, reducing poverty rates and generally alleviating the relatively depressed economic conditions in nonmetropolitan areas (Summers).

Results of the rural industrialization policies have fallen short of expectations. The local employment and income multiplier effects were found to be considerably less than had been predicted. Leakages out of the community due to employment, residential and commuting patterns; excess commercial, industrial and public service capacities built prior to the onset of increased industrial activity; and backward and forward manufacturing linkages that bypass local suppliers and consumers are some of the reasons cited (Summers).

Although the 1970s experienced a turnaround in migration patterns that produced net in-migration to rural areas, recent evidence indicates that rural areas are once again experiencing general out-migration and population decline.

Moreover, rural employment growth during this decade has been one-third of that in urban areas, and average unemployment rates have been uncharacteristically higher in rural than urban regions. Rural communities that became largely reliant upon large manufacturers have suddenly found themselves in an uncertain situation as American corporations have sought to close marginally profitable

plants or move their operations to lower cost overseas locations (Schmidt; Bluestone and Harrison).

As a result, the focus of rural development efforts has shifted from attempts to attract large firms, which seek lower cost labor, to business development and business assistance programs designed to encourage the start-up and growth of locally owned small businesses. The rationale for this shift evolved from concern about the economic dependence and risk associated with over-reliance on a single firm or industry. In place of a single large firm, development practitioners have opted to encourage the growth of a base of diversified small firms that, in the aggregate, would be less susceptible to economic downturns in the general economy or a single industry (Miller).

Changes in production and communication technologies have improved the accessibility of rural areas, strengthening their ties to the regional, national and global economies. In most rural regions farming is no longer the dominant employer, accounting for only about 8 percent of the total work force (U.S. Department of Agriculture). This diversification has reduced the effectiveness of national one-dimensional policies.

The search for policies to address a myriad of rural problems has emphasized the economic potential of the small business sector. This interest in small businesses has developed for several reasons:

1. The unfilled expectations of past rural industrialization policies;
2. The precarious economic situation now being faced by small communities that are economically dependent upon a single plant or industry;
3. Published research that finds significant numbers of new jobs generated by small firms;
4. The notion that small business development policies give local communities an enhanced ability to direct growth toward an inherent comparative advantage.

### **The Question of Small Firm Performance**

Much of the debate surrounding the contributions of small firms to employment and economic growth has taken place without the benefit of a generally accepted base of empirical research. Proponents of the small firm point to the results of job generation research being performed by David Birch of the Massachusetts Institute of Technology as evidence that small young firms are the primary creators of new employment. With these results, and similar anecdotal information, cogent, yet untested, arguments focus on the combined economic force and reduced instability associated with many small firms compared to a single large firm (Friedman; Birch; Berney and Owens).

However, the results of Birch's work and similar research have been criticized for their reliance upon a base of data that limits the accuracy of their findings, often leading to an overstatement of the role of small firms in the economy (Birley; Storey et al.). Similarly, the contribution of industrial diversity to regional economic performance and stability has been called into question. As a result of the lack of generally accepted and detailed knowledge of the dynamics of the small firm sector, researchers have been left to develop hypotheses of small firm performance utilizing a conceptual framework based on the economies of scale that favor larger firms (Hatch 1987b).

### **Small Firms and Job Creation**

Over the past three decades, the rate of new firm formation in the United States has increased dramatically. In 1950, approximately 93,000 new businesses were started in the United States, but by 1980, new businesses were being created at the rate of 600,000 per year (Naisbitt). Fueled by Birch's initial findings that younger firms employing twenty people or less accounted for more than two-thirds of net new jobs created between 1969 and 1976, increasing attention has focused on small business. In 1983, 57.4 percent of all U.S. establishments with employees employed less than five persons and 76.8 percent employed less than ten people (U.S. Department of Commerce). Moreover, very small businesses appear to be especially important in rural economies. For example, in predominantly rural Vermont, establishments with one to four employees in 1983 accounted for more than 62 percent of all establishments that year. A detailed review of New England data found that rural areas have a consistently higher proportion of small firms (Allen and Watkins).

Despite the large body of evidence that has emerged to support the thesis that small businesses play a vital role in rural regions, unsettling questions remain concerning the ability of entrepreneurship to assume a dominant role in rural development policies. Some of the more prominent concerns, discussed in each of the subsections below, include the high failure rates of new small firms and the difficulty of accurately identifying firms with the greatest likelihood of eventually succeeding.

*Small businesses are not necessarily the best job creators in rural areas.* Utilizing a database similar to that employed by Birch, Miller found that between 1976 and 1980, small firms of less than one hundred employees accounted for 31 percent of the net increase in rural jobs in the United States while large firms (multi-establishments) accounted for 68 percent of net rural jobs. In addition, small businesses were found to have made a greater contribution to job generation in urban areas than they did in rural or nonmetropolitan regions. This latter finding was especially true for the manufactur-

ing sector wherein small firms contributed 46 percent of net job growth in urban locations and only 18 percent in rural areas.

Miller notes that the time period encompassed within the study was one of rapid growth in the U.S. economy and that similar findings may not accrue during periods of stagnation or recession. The findings do, however, support the contention that small firms "incubate" more successfully in urban areas. This is generally attributed to the greater availability and diversity of inputs such as rentable manufacturing and office space; technical, financial and legal services; and skilled labor.

*Although small businesses are a major job creation force, they only account for a small proportion of total employment at any one time.* Of the 5.5 million U.S. businesses with employees during 1984, 88 percent employed less than twenty persons, yet these small firms together accounted for just 28 percent of total employed persons in the United States. (U.S. Department of Commerce). This has important implications for small business development policy. Foremost, it is apparent that a significantly large number of successful small firms are necessary to have the same employment impact of a single large firm. This raises questions about the efficiencies associated with expending limited public funds to stimulate job creation as well as about allocation of those funds to obtain the greatest benefit.

*Small young firms, and the employment associated with them, have very high turnover rates.* Most studies relate failure to the age of the firm, with failure rates generally approaching 50 percent in the first three to five years (Birch; Birley; Storey). Interestingly, the U.S. Small Business Administration concluded in 1983 that 90 percent of all closures are actually voluntary dissolutions. Whatever the reasons for which a small firm ceases to operate, it is evident that such high failure rates imply a similarly high rate of job loss. This, and other findings that small firms, on average, provide fewer employee benefits, gives rise to criticisms concerning the quality of jobs associated with the small business sector.

It is possible the statistic showing that 90 percent of all closures occur voluntarily may mask the fact that many small businessmen do cease trading voluntarily, but do so in order to avoid bankruptcy proceedings or because the business proved to be less profitable than had been originally expected. Whatever the case, such a high voluntary closure rate reinforces the argument that not all small business owners possess naturally high entrepreneurial aspirations. A review of the data suggests a complex situation. Rural entrepreneurs often do indicate a desire to expand their businesses, but look primarily to expansion within local markets (Dodd and Hammock).

*Relatively few small firms account for a large share of new employment attributed to the small firm sector.* While Birch's work has succeeded in pointing out the importance of the small business sector in

the job generation process, recent studies suggest that only a portion of all small businesses are actually responsible for a substantial amount of job generation. Detailed research that tracked the performance of small manufacturing firms in Great Britain showed that only 4 percent of the base of small firms contributed one-third of net new jobs between 1970 and 1980 (Storey et al.). Given the very large numbers of small firms that exist, the high failure rates attributed to new small firms and the apparently minor proportion actually responsible for a major share of job creation, it becomes exceedingly clear that efforts to provide blanket forms of government-sponsored assistance to small firms for the purposes of job creation are likely to meet with limited success. Alternatively, it has been suggested that there is a need to identify a mechanism effective at targeting assistance to small firms with the greatest potential to survive and prosper.

### **Small Firms and Economic Diversity**

The pursuit of industrially diversified local economies as an explicit attempt to reduce a region's potentially unstable dependence upon a limited number of industries has become a generally accepted dimension of most development efforts. Conceptually, the notion of industrial diversification has many parallels to a diversified investment portfolio as a method of reducing fluctuations and risk from an over-reliance on a limited range of investments (Conroy).

However, economic diversification has not been clearly shown to be linked to higher wages, lower unemployment or greater economic stability. Despite the popular notion that a diversified economy is less susceptible to downturns of individual industries, much of the empirical research has found the connection between economic stability and diversity to be very weak or nonexistent (Keinath; Brewer). Keinath's study of one hundred and eighty-three U.S. economic regions in 1971 and 1978 found some evidence of higher income production associated with diverse economies, yet the results did not show that a significant relationship exists between growth and diversification. Indeed, another national study covering the ten-year period between 1972 and 1981 found that a negative correlation existed between diversity and per capita income, although a very weak negative correlation existed between diversity and unemployment (Attaran).

To examine the nature of industrial diversity in New England, county level employment data were compiled and a diversity index was calculated for each county. This measure is calculated as the sum of the deviations of a county's proportions of employment in each industry category from the proportion that would exist if em-

ployment were equally distributed across all industry divisions.

$$D_j = \text{sum} \left| \frac{e_{ij}}{E_j} - \frac{N}{100} \right|$$

where:

$D_j$  = Diversity Index for the  $j$ th region;

$e_{ij}$  = Employment in the  $i$ th industry in the  $j$ th region;

$E_j$  = Total employment in the  $j$ th region;

$N$  = Number of industry categories or sectors.

The diversity measure is conceptually identical to that of Keinath, with the exception that Keinath utilized sectoral income in place of employment to measure industrial distribution. The danger in utilizing sectoral incomes arises from the large relative variation that exists in the average earnings attained in different economic sectors that may distort the employment contribution of some industries. Although it is acknowledged that varying incidences of underemployment (part-time and seasonal) also occur across industries and may produce distorting effects, these are not judged to be as severe as in the case of income levels. In either case, perfect diversification wherein employment is equally apportioned in each industry division, results in an index equal to zero. As a region's distribution of employment deviates from perfect diversity to specialization, the index increases in value.

Table 1 presents the diversity measures for both the United States and New England. Similar to Keinath's regional studies, the overall New England region, with a diversity score of 88.1, is more specialized than the U.S. economy which has an overall index of 77.9. As seen in the table, the higher index number in New England results from a larger concentration of employment in the manufacturing and service industries. In fact, Keinath's study revealed the northeastern United States to be the most specialized region in the country, having increased its specialization in manufacturing between 1971 and 1978.

The interest in promoting diversification of rural communities stems from their perceived dependence upon a limited range of industrial activity. In many small communities, a single large firm is the dominant source of employment. In fact, it should be expected that employment in smaller geographic regions would be more specialized in a few industries than would a larger region. This hypothesis was substantiated in New England where the average county

level diversity index was equal to 94.0 in 1985, while the index for the New England region as a whole was 88.1.

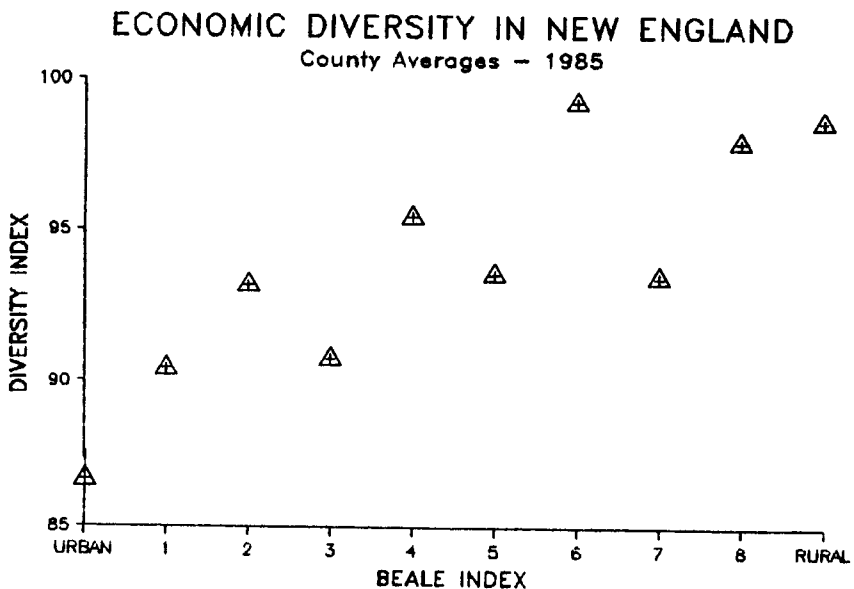
**Table 1. Diversification Index for the U.S. and New England**

Industry	U.S.—1984		New England—1985	
	Percent	Deviation	Percent	Deviation
Agri. Services	0.5	10.6	0.4	10.7
Mining	1.3	9.8	0.1	11.0
Construction	5.4	5.7	4.3	6.8
Manufacturing	25.1	14.0	27.8	16.7
Transportation	6.1	5.0	4.5	6.6
Wholesale Trade	6.9	4.2	5.8	5.3
Retail Trade	20.9	9.8	21.2	10.1
Finance, Insurance, Real Estate	7.5	3.6	7.5	3.6
Services	<u>26.3</u>	<u>15.2</u>	<u>28.4</u>	<u>17.3</u>
Index	100.0	77.9	100.0	88.1

Source: *County Business Patterns*, U.S. Department of Commerce.

To uncover differences in the levels of diversity between urban and rural areas, an index of county size and adjacency to metropolitan areas was applied to each of the sixty-seven New England counties. The diversity scores for each of the individual counties classified in equivalent rural/urban categories were then averaged. The results are presented in Graph 1. Although the graph depicts a very uneven progression, there is evidence of a trend toward specialization in the rural counties. The oscillation that appears in the graph, especially

GRAPH 1



between the Beale Index numbers 2 to 8, may result from the the counties' location relative to metropolitan areas, indicating a possible interaction of this factor with diversity, as well as the urban/rural factor.

More pertinent to the issue of small firms is the question of small firm contribution to industrial diversity. At least part of the rationale favoring the encouragement of small business activity is the potential gains to diversification that might result from a vibrant base of small firms. To examine this, New England employment data were disaggregated into their various components by size of firm. In Table 2, the diversity indexes show that employment in medium size firms (10-19 employees) is the most diversified, while both smaller establishments (less than 10 employees) and larger establishments (more than 100 employees) have indexes higher than the New England aggregate index.

**Table 2. Distribution of Employment and Diversification Indexes in New England by Firm Size Categories, 1985**

Industry	1-9 Emps.	10-99 Emps.	Over 100 Emps.	All Firms
	—percent—			
Agri. Services	1.0	0.5	0.1	0.4
Mining	0.1	0.2	0.1	0.1
Construction	9.0	6.0	1.5	4.3
Manufacturing	5.4	18.3	41.7	27.8
Transportation	2.8	4.9	4.7	4.5
Wholesale Trade	6.3	8.8	3.4	5.8
Retail Trade	38.4	30.6	9.0	21.2
Finance, Insurance, Real Estate	7.2	6.5	8.4	7.5
Services	<u>29.8</u>	<u>24.2</u>	<u>31.1</u>	<u>28.4</u>
Total	100.0	100.0	100.0	100.0
Index	91.9	79.6	101.2	88.2

Source: *County Business Patterns*, U.S. Department of Commerce.

Based upon the high diversity index for large firms (101.2), it is not unreasonable to expect that large size firms have a specializing influence on the economy. Eliminating small firms from the computation of the New England index, however, results in a slightly higher, more specialized index. This indicates that although small businesses are more specialized than the economy as a whole, their presence does indeed have a diversifying influence. Thus, the promotion of small and medium size firms should result in a more diversified economy.

Despite these cautionary notes, enough information has evolved to suggest that appropriate policy initiatives to stimulate entrepreneurship in rural areas could have a significant positive impact. For example, although the level of contribution is in question, small firms are obviously an important economic force, if only by virtue of their



absolute numbers. Further, Berney and Owens assert that “small firms tend to provide price competition, to lead in the development of new products and processes, and to generate new innovations and new employment” (Berney and Owens, p. 689). Small firms have also been found to represent a greater proportion of business establishments in rural than in urban areas (Allen and Watkins). Finally, while some of the empirical studies of diversification have found only weak links to economic performance, the evidence has generally been positive in this respect, suggesting that improvements in data or research methods may uncover a stronger relationship. Among the positive findings are studies that have shown that communities with diversified entrepreneurial bases have higher income levels, more stable economic growth and higher rates of home ownership (Kent).

### **Recent Insights into the Small Firm**

Effective policy formulation results from a thorough understanding of the issues to be addressed. In the case of small businesses, public policies to promote the development and growth of the small firm sector have developed faster than knowledge about small firms. Special policy treatment for small firms requires a much deeper understanding of the process by which firms are created. At a minimum, it requires an analysis of the market failure that precipitates the need for public intervention, an understanding of the externalities created by public policies and the process by which small firms contribute to diversification (Storey).

Several areas of research related to small firms in recent years have helped to clarify some of the complex dynamics of small firms, and have proposed new theoretical approaches for addressing the weaknesses in the present understanding of small businesses. These topics have included 1) the “seedbed” argument that contributions to innovation, job creation and economic vitality often attributed to small businesses are directly related to the flux and volatility of the small firm sector; 2) the rapid rise of small business incubators as a response to the need for institutional mechanisms to support new small firms; and 3) the erosion of mass production manufacturing in the United States and the concurrent rise of flexible, customized production technologies.

### **Small Firm Seedbeds**

Applying the concepts of David Birch’s work on the job generation process, but departing from his use of large scale databases, some researchers have recently taken the approach of studying in greater detail the start-up, expansion, job creation and failure characteristics of a limited number of individual firms (Storey; Birley; Beesley and Hamilton). This method has generally succeeded in overcoming many of the problems of incomplete or inaccurate data attributed to

the Dun and Bradstreet files used by Birch. The impact of database selection upon this type of research was underscored by Birley whose detailed study of St. Joseph County, Indiana, found that the Dun and Bradstreet Dun's Market Indicator (DMI) files listed only 12 percent of the firms actually in operation during the period of study.

Beesley and Hamilton's analysis of firm birth and death ratios within specific manufacturing industries found that imprecisely defined Standard Industrial Classification categories evidenced the highest rates of both births and deaths (i.e., high turbulence). Since the imprecisely defined industries consist predominantly of firms whose products are novel, unconventional and lack easy categorization, it would appear that innovation is closely linked to high levels of entrepreneurial activity. These highly turbulent industries were subsequently referred to as seedbeds for new enterprises.

In an exhaustive study of small firms in England, Storey, et al. are critical of programs that provide across-the-board assistance to small firms based on the argument that small businesses, in general, are the primary creators of new jobs. In fact, they conclude that policy efforts to stimulate new small firm formation are likely to contribute little to overall job generation. This conclusion stems from their finding that only the fastest growing 4 percent of new firms create one-third of manufacturing jobs. In place of blanket assistance programs, Storey calls for greater selectivity to provide assistance to the few firms that are most likely to generate employment.

Birley's work in Indiana and the research of Beesley and Hamilton in Scotland emphasize the turbulent nature of the small business sector, reflecting the high rate of firm starts and firm failures. Moreover, it is this very volatile nature of small businesses that appears to be a positive contributory factor in the net growth of the small business sector. Both studies found that the greatest rates of net job creation occurred within the most volatile sectors, or seedbeds, and involved emerging industries or products. As a result, the incidence of seedbed activity within a local economy could be expected to generate increased economic diversity.

It should be expected that sectors with high rates of new firm formation will necessarily experience high numbers of firm closures due to the inherently high failure rates of new firms. It is noteworthy, however, that these sectors consistently produced net gains (Birley; Beesley and Hamilton) indicating a slightly improved likelihood of firm survival. The reasons for this are unclear. Turbulence within imprecisely defined seedbed industries arises primarily from independently owned firms, while higher rates of births and deaths among dependent, or subsidiary, firms take place within fairly well-established industries and products. Interestingly, there is some similarity between those sectors that Beesley and Hamilton identified as seedbeds for small firms, and those that Storey, et al. uncovered as having high concentrations of fast growth firms. Combining the inde-

pendent conclusions reached by Birley, Storey, et al, and Beesley and Hamilton (and quite possibly pushing back the limits of inductive reasoning) there is evidence for the following argument: Net gains to employment, apparently generated by the fastest growing small firms, result from the higher levels of entrepreneurial activity (i.e., turbulence) which is closely associated with innovation and emerging industries.

### **Small Business Incubators**

Policy attempts to facilitate the survival of small firms have often focused on identifying a crucial need of small businesses, and then addressing that particular need with the intention of spurring small business formation. Such single-effort policy intervention fails to recognize that small businesses have multiple priority needs that exist simultaneously, and that multiple resources must be made available in a coordinated fashion. The recent emergence of small business incubators represents an attempt to make accessible to small businesses a full range of business support services, with the intended goal of reducing the failure rate of new start-up firms.

As initially conceived, small business incubators were designed as a rehabilitative use of existing vacant manufacturing space that could be subdivided and leased to a number of small business tenants at below market rates. In addition to lower cost space, incubators were intended to serve as vehicles for providing a fully developed program of shared business services, management advice and, in some cases, financing. By placing new small businesses in a less turbulent environment, and nurturing their development with lower cost rents and services until they had reached a degree of maturity, it is reasonable to expect that those firms would achieve a greater survival rate, even after relocating outside the incubator (Campbell).

Despite their relative newness, incubators have become increasingly accepted as a legitimate approach to fostering entrepreneurship. In addition, studies of incubators have revealed that they provide some unanticipated benefits to small firm tenants, and that the incubator concept is somewhat more malleable and adaptable than originally suggested (Watkins, Dunn and Allen). Utilizing a fairly broad definition of incubators, the services provided range from virtually none to a comprehensive program tailored to the needs of tenants. As an economic development tool, incubators have been found to be quite adaptable to a variety of settings, with indications that the concept may be successful in rural areas.

Within the less technically oriented incubators, where proprietary information is less likely to be a business concern, interviews with tenants uncovered a common theme of interaction and subcontracting that appeared to be nearly as important as the accessibility of services. Operating within the confines of an incubator building

places entrepreneurs in more frequent contact with other entrepreneurs with potentially similar commercial interests. For some, this increases their ability to obtain or generate subcontracted work, or identify potential partners for joint ventures.

## **Flexible Manufacturing and Small Firm Networks**

Piore and Sabel argue that the industrial economy, after a century of mass production and mass markets, is reverting to a more varied system of specialty producers. Saturation of markets serviced by mass production industries, and specialization in the consumer marketplace are presented as two fundamental forces shaping the changes in American manufacturing. The use of special purpose machinery and semi-skilled workers that permit the scales of economy in mass production are now revealing their inherent technological and economic limitations that prevent large manufacturers from making rapid product changes to meet the demands of consumers.

As a result, the factories of the 1980s are increasingly using digitally controlled and computerized equipment that can be reprogrammed for a variety of purposes. These techniques allow the smaller, more adaptable companies to challenge the giants by offering custom tailored batches of output rather than continuous flows of mass designed commodity goods.

As firms have faced the need to redesign products and methods to address rising costs and growing competition, they have found new ways to cut the costs of customized production. And the more they have narrowed the gap in cost between mass and craft production, the easier it has become to draw customers away from the formerly cheaper mass produced goods. In short, craft has challenged mass production as the paradigm (Piore and Sabel, p. 207).

During the past decade, the cost of new production technologies such as computer-aided design have decreased substantially, making such equipment accessible to smaller shop owners (Hatch 1987b). Taking this trend one step further, some authors have examined the growth of small manufacturer networks in Europe as a model for U.S. reindustrialization. Such networks have developed as a "coherent system of small and medium size firms in which strong commercial linkages have formed as a result, for example, of sharing marketing or technology transfer services" (Hatch 1987a, p. 5). Through network participation, a small specialized firm is able to produce a sophisticated, fully-assembled product by subcontracting out the manufacture of numerous individual components to other specialty firms in the area.

Operating within one or more organized networks of technologically advanced firms gives small manufacturers the ability to partici-

pate in the production of a large variety of goods and to meet the demands of many customers, thus affording them the capability to compete against much larger firms. Consequently, with the knowledge of the capabilities of other firms operating within a network, and its own flexibility in adapting production to meet customized needs, these firms have expanded opportunities to enter new markets.

The successful development of several networks in the Italian economy has been strongly supported by programs emanating from trade associations, trade unions, municipal and regional governments and educational institutions. Together, these programs combine to provide inexpensive professional, technical, legal, financial and clerical services. While it is the advent of newer technologies that have made possible economies at much smaller scale, it is membership in such support organizations that make possible economies of scale in administration. Furthermore, the provision of services is fostered by the construction of workshops, factory space and manufacturing infrastructure, as well as living accommodations intended to serve as artisan villages (Hatch 1987a). In some respects, the manufacturing network concept appears as a hybrid version of the small business incubators that have evolved in this country.

### **Policy Implications**

A principal argument of this paper is that interest in entrepreneurial policy has outdistanced research based understanding of entrepreneurship. Based upon the information presented in the previous sections, the policy alternatives addressed here are intended to narrow the gap between the two. Information presented under the heading, "The Question of Small Firm Performance," is derived from a prepolicy or status quo view of the economy. The discussion of recent observations regarding small firms in "Recent Insights into the Small Firm" provides a transition to a more informed set of policy options. However, the issues are complex and the alternatives for rural areas are neither obvious nor clearly separable components that can be applied easily without a thorough understanding of broader regional forces.

Beesley and Hamilton indicate that the turbulent small firm seedbed, with its high rates of firm births and deaths, is the source of net job creation. From a policy standpoint, they argue that due to the inherently risky nature of new business starts, attempts to increase job generation should seek to reduce the failure rates of firms already in operation as opposed to encouraging greater rates of new business starts. Similarly, Storey et al. find that only a small percentage of firms that do survive actually go on to expand and create a significant number of jobs, and suggest that policies to stem failure rates should be targeted to those firms that possess the greatest potential

to create additional employment. Although both authors acknowledge the political as well as technical difficulty of selectively assisting potentially successful firms, these arguments indicate the need for a targeted approach to small firm promotion.

Small business incubators have grown in popularity as a mechanism for providing services to a small group of entrepreneurs. Some recent evidence suggests that failure rates among incubator tenants has been dramatically lower than that of nonincubator firms. The reduced rate of failure is generally attributed to the increased availability of business support services. However, an argument can be made that incubator tenants, because they must make a proactive decision to operate within an incubator, may not be typical of most small firms and, in fact, may be more similar to Beesley and Hamilton's successful seedbed firm or the fast growth firm identified by Storey. If so, the self-selecting nature of incubators may provide the targeting mechanism necessary to direct assistance to high potential small firms.

At this point, the important issue concerns the usefulness of incubators in rural environments. Most incubator developments have been situated in or near urban centers where it is presumed that sufficient entrepreneurial activity exists to fully utilize available incubator facilities. Rural environments have a geographically dispersed entrepreneurial pool from which to draw tenants. Do the policy suggestions of Storey, and Beesley and Hamilton, to forego the encouragement of new starts and concentrate on fostering the growth of existing firms seem appropriate in rural areas where entrepreneurial activity is more sporadic? Bernier and McKemey, in a case study of rural development, argue that entrepreneurs must be actively sought out and promoted in rural areas—that insufficient activity occurs naturally to expect significant success from a passive approach of waiting for aggressive entrepreneurs to seek out support.

The adaptability of the incubator concept suggests that in rural areas incubator operations may need to take on an additional set of functions such as outreach, community organization and technology transfer. Economic diversification necessarily suggests the introduction of new industries and enterprises that do not presently exist in a local or regional economy. The emergence of specialty markets and the growing affordability of flexible manufacturing equipment have created new opportunities for rural entrepreneurs. In a role that includes extensive outreach and the coordination of existing service networks, incubators might build upon the foundations of cooperative activity that exist in rural areas to encourage the development of cooperative manufacturing networks. Although critics of this viewpoint to the competitive nature of most U.S. industries and the likelihood that large firms will modify traditional mass production systems to compete more effectively in specialty markets, the potential exists for interfirm networking to become a useful part of rural development policies.

The importance of a coordinated effort to achieving rural development and diversification underscores the need to advance the state-of-the-art of institutional relationships (Gray). Too often, public/private partnerships are developed as a short-term response to a crisis situation. Several models of public/private partnerships have been put forth recently, each focusing on varying aspects of the interrelations of university research and outreach, private sector networks and the role of the public sector regarding the physical and financial infrastructure for business development.

To a significant degree, the development of an entrepreneurial base is influenced by the character of the broader regional economy (Young). The examination of the interaction between local entrepreneurs and regional economic forces is a means of isolating and monitoring important sources of change within the small business sector and serves to provide a basis for strategically positioning entrepreneurs for emerging opportunities in larger markets.

Finally, the process and effect of diversification as a goal of rural development needs to be reviewed. The attraction of diversity lies in the widely-held view that a diverse economy is more stable and less prone to wide fluctuations emanating from cyclical swings in the national economy (Conroy). Yet results of empirical research appear to be inconclusive on this issue. Most research, however, has examined the national economy or its subregions during relatively brief time periods. During periods of economic expansion, economies specialized in rapid growing industries will no doubt outperform diversified regions. It must be remembered that an overarching objective of diversification strategies is to reduce instability over the long term. Efforts to examine this aspect, particularly as it related to rural economies, need to be encouraged if diversification is to be a fundamental objective of rural development policies.

It might be well to acknowledge that the process of economic diversification is a considerably more complex matter than simply attracting new and different industries. If diversification becomes a major thrust of rural development, policies should reflect a sensitive analysis of industrial mix including firm size, growth rates and degree of stability, types of labor employed and industry interrelationships (Attaran).

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