Evaluating the Efficacy of Forest-Based Economic Development Activities in West Virginia
by
Rory Fraser and Doolarie Singh¹

ABSTRACT

The forest-based economic development strategies and activities in rural West Virginia communities were examined by surveying representatives of county, regional and state economic-development entities. Respondent organizations were involved in three main type of activities: chasing and acquisition; self-improvement and knowledge; and process strategies. Chasing and acquisition was the typical strategy employed by these organizations. The development of industrial parks and the recruitment of national and/or international wood industry companies were evidently the primary activities of these entities. The respondents suggested that efforts to enhance the effectiveness of forest-based economic development in WV should focus on venture capital availability, improved workers compensation rates, creating value-added organizations, building a skilled workforce, reducing out-migration, and improving infrastructure development and the tax incentive structure.

INTRODUCTION

"After long isolation from its sister disciplines in the sphere of rural development, forestry has in the last decade emerged from its concentration on conservation and production practices largely in the remote areas to a wider focus embracing an outreach to the general rural population. Inasmuch as the other sectors involved in the rural development effort over the past three or four decades had considerable head start, it follows that they have built up a good reservoir of experience both good and bad, which forestry in its new expansion of interest could tap." (Blair and Olpadwala, 1988).

West Virginia (WV) is one of the poorest states in the nation and its rural communities are more hard pressed than their urban counterparts. At the same time, WV is one of the most densely forested states in the USA. The combination of poverty amidst a wealth of forest suggest that economic development based on the forest resource could provide solutions for the poor rural communities. However, even though decades of public programs have significantly improved the well-being of WV’s citizens, rural counties still tend to have the highest employment rates, poverty rates and out-migration (Isserman, 1995). However, even though decades of public programs have significantly improved the well-being of WV’s citizens, rural counties still tend to have the highest employment rates, poverty rates and out-migration (Isserman, 1995). In fact, the three counties (Tucker, Summers and Pendleton) with the lowest average annual wage rates are among the most densely forested counties in the state (WV Bureau of Employment Programs, 1995).

¹ Associate Professor, Alabama A&M University and Ph.D. Student, College of Agriculture, Forestry and Consumer Sciences, West Virginia University. Submitted to Southern Forest Economics Workshop, Atlanta, March 26-28, 2001.

This phenomenon raised two major questions: Are the WV communities most dependent on the forest resource more likely to be poverty prone? If they are, is this because they (a) cannot do better, (b) did not do enough, or (c) did not do the right thing? The answer to these questions may be intertwined with answers to similar questions posed by Isserman (1994) in his review of state level economic development programs. Questions such as: Which state level economic development strategies are succeeding? Who are the beneficiaries? What are the advantages or disadvantages of state programs? What is or should be the federal role? Are these programs serious attempts at economic development, short-term political actions, short-lived fads or convenient banners for old programs?

There is a paucity of information about the success of forest-based economic development efforts relative to the success of other types of economic development efforts or the relative success of economic development efforts in forest-dependent communities as compared to other rural communities. There are two reasons for this lack of information. First, evaluations of economic development programs are not activities traditionally performed by foresters. Second, these issues have not attracted major research activity by mainstream economic development personnel.

The paucity of research is further confounded by
recent changes brought about by what Rowe (1994) terms a “new cultural paradigm…one that switches the focus from people and their needs and wants to the Ecosphere and its requirements for continued health, integrity and sustainability”. Some foresters contend that this is, in effect, a new forest management paradigm: that is, ecosystems management (Kimmins, 1995). Others, (Wiant, 1995) contend the change is “some vague and indefinable concept”. Whatever it is called, the new paradigm is evident in WV and it is impacting forest-based economic development activities. At present, a pulp mill proposed for Mason county has become a contentious issue with two sides battling over the trade-off between jobs and the environment. The dynamics of current forest management practice is such that, even as we begin to comprehend the economic relationship between forest resources and rural communities, social and professional perceptions of the forests are changing. As Blair and Olpadwala (1988) suggest, evolving forest management practices require non-traditional perceptions.

The results anticipated from this research project will contribute to our knowledge of the impact of economic development activities on rural communities. The findings is of relevance to WV University’s Division of Forestry Strategic Plan for 1992-1997, WV Council for Community and Economic Development Strategic Plan, 1993, and the United States Department of Agriculture, Forest Service Working Together for Rural America programs.

The typologies and methodology developed in the study will be used to expand the study area to regional, national and international forest-dependent communities. These findings may assist in the development of appropriate economic activities and the planning of suitable business investment opportunities for forest-dependent communities.

PREVIOUS WORK AND PRESENT OUTLOOK

Natural resources have traditionally been used to bring about positive economic transformation in America’s rural communities. Carriker (1989) points out that the Homestead Act and the Reclamation Act are examples of Federal legislations in this tradition. Nothdurft (1984), however, suggests that it is at the state level that coordinated programs are developed for the economic use of natural resources. The reasons being that in terms of sheer scale, regional differences, interest group competition and other major problems effective national leadership is not possible. This indicates that evaluation of state-level activities may be an appropriate point from which to approach an understanding of forest-based economic development programs.

Isserman (1994) was credited with the most comprehensive review of state level economic development programs. In his review he generalized the orientations of states’ policies into three categories: chasing and acquisition; self-improvement and competitiveness; and knowledge and process. Each orientation, he suggests has evolved in response to major macroeconomic events. In the process each orientation has become another layer of the states’ economic development policy framework. Isserman (1994) pointed out that it was very difficult to assess the effectiveness of these programs because very few were ever evaluated.

Swanson (1989) evaluated some rural development programs and then concluded that rural development policies are hampered by five factors: the perception of a bucolic rural economy; the serious limitations to data on sparsely populated areas; the treatment of rural communities as if they are unconnected to the rest of the US; the perception that many rural areas do not have a viable political solution; and the absence of a unified rural constituency.

These reviews of state-level programs provide useful macro information but did little to provide information about the target of the programs, rural people or communities. In order to evaluate economic development programs agricultural economists and rural sociologists started looking at changes at the county level. The first step in the process was the development of a typology for the counties. Beale (1990), developed one of the first such topologies, a definition of non-metropolitan (rural) and metropolitan (urban) counties. Other county typologies were developed, such as Bender et al. (1985), which separated counties into seven categories: farming, manufacturing, mining, government jobs, poverty, federal lands, and retirement settlements. These typologies are still in use today.

Krannich and Lullof (1991) examined resource-dependent communities (in which activities revolved around agriculture, forestry, fisheries, mining petroleum, and recreation and tourism) and concluded that these communities were captives to external control of the resource and resource development decisions. At the same time the residents were apathetic about rural development and lacking skills that attract potential investors.
Drielsma (1984) was one of the first to use county-based data to develop a forest-community typology. He developed and used four communities in his analysis of timber-development communities: tourism, forestry, mining, and agriculture. In a later discussion of sustained yield and community stability, Drielsma et al. (1990), paint a bleak picture of timber-dependent communities:

“They are among the least prosperous of all rural communities, with high seasonal unemployment, low wages, and high rates of population turnover. Standards of health and happiness appear to be lower than average. While the status of the family remains high, divorce rates are also high. Housing, public services and amenities are poor. Outside forces seem to predominate over community institutions that might provide an integrated and cohesive community.”

A critique of forest-dependent communities studies, such as the above, is the tendency to focus in those communities in which the timber industry has a significant role, while ignoring the other forest-based activities that could provide other economic benefits. This point was made by Machlis and Force (1990) who observed that in the study of timber-dependent communities:

“…… The literature has most often focused on communities dependent upon a single resource…………….. Yet, timber-dependent communities tend to be found in multi-use environments (such as Forest Service Lands), and hence many such communities rely on several simultaneous resource bases.”

Thomas (1992), developed a similar theme in her discussion of a new rural development philosophy which may key future success in rural areas. The strategy termed “recouple” is based upon assessing and seizing upon the existing rural resources to uncover new enterprise opportunities. Embedded in this strategy is an inkling of the evolving forest management paradigm expressed in:

“…… we are on the verge of a paradigm shift from forestry understood as primarily the production of sustaining ecosystems by managing human uses to ensure sustainability, a switch in focus from the trees to the forest ecosystem……..What has been suggested here as a New Forestry Paradigm is a part of a new cultural paradigm, one that draws strong support from the findings of modern science……..”. Rowe (1994).

The work of Fletcher et al. (1994) and Norton et al. (1995), support the inference that economic activity and ecologic aesthetics are not incompatible. At the same time, the works of Maggars (1994) on gender issues, and Speiler (1993) on workmen compensation suggest we cannot ignore the differential impacts of economic development programs. We need to incorporate the economic role of women (Oberhauser, 1993) in our analyses and also recognize that development policies may actually worsen already impoverished areas. The themes also echoes in the “reinventing government movement” (Osborne and Gaebler, 1992), which is based on the idea that government services should empower local initiative and capacity rather than foster dependency and a loss of local control.

The possibility of multi-dimensional forest-based economic development strategies and the existence of multi-dimensional forest-dependent communities have been ignored in previous analysis. This suggests that in order to properly assess an economic development program it is important to develop the proper units of analysis. First, the definition of a forest-based economic development typology that includes programs aimed at developing the: indigenous wood industry, forest-based tourism and recreation, forest-based crafts industry, special forest products industry, and other forest-based economic activities. Second, the definition of a forest-dependent community typology that includes consideration of all forest-based manufacturing, service or extractive sectors.

Evaluation of the impact of state-level economic development initiatives on WV’s rural communities is possible when the appropriate units of analysis are developed. Extension of the analysis to other study areas is the contingent on the efficacy of research method developed.

STATEMENT OF THE PROBLEM

The challenge for organizations involved in forest-based activities is to determine how best to use indigenous forest resources to effectively impact economic development in the state. An assessment of the relative success of forest-based economic development activities and their impact on forest-dependent communities in WV is necessary.

RESEARCH OBJECTIVES

The goal of this study was to determine the efficacy of economic development programs in forest-dependent communities in WV.
Specific Objectives:
There were three specific objectives of this study:
1. to identify organizations operating within the study region that are engaged in forest-based economic development activities; and develop a profile of the organizations involved in such activities within the study region;
2. to identify successful forest-based economic development strategies being used in WV; and
3. to assess the impact of forest-based economic development activities on rural communities in WV.

METHODOLOGY
The objectives of this research project were accomplished by firstly identifying those organizations (state agencies and private organizations) operating within the study area that are engaged in economic development activities. Relevant organizational directories were searched and a mailing list of organizations was created.

The Survey Instrument
The survey instrument shown in Appendix A was developed to achieve the stated objectives. The survey was mailed to 54 organizations involved in economic development activities in WV (approximately one-third of all such in the state according to the WV Economic Development Council 1998-1999 Membership Directory) during June 2000. A combination of on-site and telephone interviews were conducted with these organizations during June-September, 2000.

Question 1 of the survey asked for a general definition or explanation of the respondent’s understanding of the term ‘forest-based economic development’. Open-ended responses were required.

Question 2 of the survey examined the involvement of the organization in forest-based economic development activities within the study region. More specifically, attempts were made to classify these activities into the one or more of the three categories identified by Isserman, 1994, namely chasing and acquisition; self-improvement and competitiveness; and knowledge and process.

Question 3 of the survey elicited information concerning relevant third-party groups/organizations that assist the responding organization with the forest-based economic development activities.

Questions 4 through 6 of the survey sought to identify outcomes of these activities as well as the problems and limitations encountered in their accomplishment, and suggestions as to how these may be overcome.

Question 7 of the survey was designed to develop an overall hierarchical map of organizations involved in forest-based economic development activities in WV. The responding organizations were asked to fit themselves within this framework.

Question 8 sought to identify the resources (including funding, staff and others) used in accomplishing the goals of the organization.

Question 9 asked for the respondent’s vision for forest-based economic development in WV in the next five years and what might be necessary to achieve this vision.

RESULTS
The mail survey of WV sheep producers had a total response rate of 26 percent, with 5 percent being unusable because respondents were not involved specifically in forest-based economic development activities. There were 11 usable questionnaires. The low response rate was probably due to the fact that participants claimed to be grossly understaffed, or that many of the organization had little or no forest-based economic development activities within their purview or because they were disinterested in the topic being researched. A comparison of producer characteristics in the sample with those reported in the WV Economic Development Council 1998-1999 Membership Directory confirmed that the sample was representative for organizations at the state and regional levels but under-represented for organizations at the county and city levels. The hierarchical framework of responding organizations is presented in Table 1.

Table 1: Framework for organization involved in forest based economic development activities in WV.

<table>
<thead>
<tr>
<th>Level</th>
<th>Survey</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATE</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>REGIONAL</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>COUNTY</td>
<td>26</td>
<td>5</td>
</tr>
<tr>
<td>CITY</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>OTHER</td>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>
In WV, economic development programs are developed by the state, and administered by the WV Economic Development Office. Each Regional Offices are responsible for fulfilling the objectives set out by the WV Economic Development Office. Counties, and cities and other organizations follow in the chain of command for fulfillment of these objectives.

**Forest-Based Economic Development (FBED):**

FBED was predominantly identified as strategies for the use forest-based products to create business opportunities to improve the standard of living/quality of life and salary-earning potential for community members. Uses of natural resources include extraction of timber, processing and production of value-added products, nature-based recreation, and wild-harvest products. Creation of business opportunities involves identifying and providing products and opportunities to satisfy a need (or perceived need) which must be tied to cost-benefit analysis. These activities can be classified as chasing and acquisition, self-improvement and competitiveness, and knowledge and process. Further, some respondents saw forested areas as mitigation areas for pollution, which may ultimately lead to changes in land use plans/mass transit systems/ automobile emission/expanded green space for the area.

The focus is primarily on timber resources, including primary production of lumber as well as low-to-medium value-added activities, but slowly changing to resources intrinsic to the forest including non-commercial product activities.

FBED opportunities in WV were identified as open to anyone with the vision and spirit to pursue this challenge and willing and able to assume the associated risks, including in-state and out-of-state entrepreneurs.

**Activities Consistent with FBED Activities:**

The predominant strategy being pursued with respect to FBED in WV is ‘chasing and acquisition’ with some ‘self-improvement and competitiveness activities’, but little ‘knowledge and process’ strategies being used. 95 percent of respondents had ‘chasing and acquisition’ as their major strategy being pursued, which included such activities as infrastructure development, establishment of industrial sites and shell buildings, trade missions and the publication of information brochures for marketing purposes. These strategies are geared towards recruiting new regional, national and international companies. ‘Self-improvement’ strategies are practiced by 65% of respondents and included such activities as retention visits, industrial park development and infrastructure development for retaining existing businesses.

While most counties and regions appeared to compete for existing and new businesses in the wood industry, the development of initiatives such as the Hardwood Industry Resource Zone (HIRZ), the Polymer Alliance Zone (PAZ), and to some extent, the Robert C. Byrd Wood Technology Center appear to be a move away from this trend. The HIRZ and PAZ are multi-county consortiums for the chasing and acquisition of local, regional and international companies, while the Wood technology Center seeks to improve the quality of skills available in the wood industry in WV.

All respondents emphasized that value-added activities formed the crucial underpinning to the development of the wood industry in WV, while only percent 35% actually had completed or proposed including this as one of their strategies for FBED. Even so, where value-added activities were being pursued mostly through a ‘chasing and acquisition’ strategy of international companies with only the Wood Technology Center and the Fernow Experimental Station pursuing ‘knowledge and process’ strategies among local entrepreneurs or businesses.

**Outcomes of FBED Activities:**

These foregoing FBED activities have resulted in the following accomplishments:

- trade shows
- trade missions
- product development and market diversification
- new business incubators, shell building and/or industrial parks development
- recruiting for and filling of industrial parks
- training facilities established
- training provided and extension service for forestry management
- retention of existing jobs as well job creation
- collaborations and referrals
- environmental impact assessments
- revolving loan programs for wood industry

Involvement with Other Groups and/or Organizations:

In order to fulfill the FBED objectives, regions and counties were involved with a variety of other groups and organizations. A cross-section of these groups and organizations are presented in Table 2.

Problems and Limitations in Achieving Stated Objectives:

The major problems and limitations encountered by organizations in pursuing FBED strategies are outlined in Table 3.

Recommendations for Alleviating these Problems and Limitations:

Major recommendations for alleviating the foregoing problems and/or limitations are summarized and ranked in Table 4.

Table 2: Cooperating Groups/Organizations for FBED Activities in WV.

<table>
<thead>
<tr>
<th>Public Agencies</th>
<th>Private Agencies</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>WV Economic Development Office</td>
<td>WV Manufacturers Association</td>
<td>Private Landowners</td>
</tr>
<tr>
<td>Regional Planning and Development Councils</td>
<td>Power and Telephone Companies</td>
<td>Chambers of Commerce</td>
</tr>
<tr>
<td>County Commissions</td>
<td>Financial Institutions</td>
<td></td>
</tr>
<tr>
<td>Cities and Municipalities</td>
<td>Economic Dev. Consultants</td>
<td></td>
</tr>
<tr>
<td>WV Infrastructure and Jobs Development Council</td>
<td>Water and Sewage Companies</td>
<td></td>
</tr>
<tr>
<td>WV Division Of Forestry</td>
<td>Marshall &amp; WV University</td>
<td></td>
</tr>
<tr>
<td>US Department Of Commerce EDA</td>
<td>Private Investors</td>
<td></td>
</tr>
<tr>
<td>Appalachian Regional Development Commission</td>
<td>Private Development Corporation</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Mean Responses for Problems and/or Limitations Faced by Organizations Pursuing FBED Programs

<table>
<thead>
<tr>
<th>Problems</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient “Best Management Practices’ Being Used and no Long Term Planning</td>
<td>1</td>
</tr>
<tr>
<td>Unavailable Capital (Including Venture Capital)</td>
<td>1</td>
</tr>
<tr>
<td>Limited Skills at Entry-Level</td>
<td>2</td>
</tr>
<tr>
<td>Archaic Tax Structure</td>
<td>2</td>
</tr>
<tr>
<td>Limited Personnel (regional, county, city)</td>
<td>3</td>
</tr>
<tr>
<td>Limited Workforce and Out-migration at Entry-Level</td>
<td>3</td>
</tr>
<tr>
<td>Low Workers’ Compensation Rates</td>
<td>3</td>
</tr>
<tr>
<td>Lack of Incentives</td>
<td>3</td>
</tr>
<tr>
<td>Insufficient Marketing of Region</td>
<td>4</td>
</tr>
</tbody>
</table>

Resources Used in FBED Activities:

Funding: Funding for FBED activities comes form multiples sources, including public and private sources. A summary of these sources is presented in Table 5.

Table 3: Mean Responses for Problems and/or Limitations Faced by Organizations Pursuing FBED Programs

<table>
<thead>
<tr>
<th>Problems</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate Infrastructure Development</td>
<td>1</td>
</tr>
<tr>
<td>Little Value Being Added Within</td>
<td>2</td>
</tr>
</tbody>
</table>
State
Archaic and Over-Zealous Environmental Regulations 2
Competition for Businesses 2
Topography 3
Lower Wage Rate at Entry-Level 4
Lack of Coordination among Regions, Counties, Cities and Municipalities 4

* Rank (1=Most Frequent → 4=Least Frequent Response)

Table 4: Mean Responses for Recommendations for Problems and/or Limitations Faced by Organizations Pursuing FBED Programs

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhanced legislation for workmen’s compensation and taxation</td>
<td>1</td>
</tr>
<tr>
<td>Improved infrastructure development</td>
<td>1</td>
</tr>
<tr>
<td>Increased planning and coordination among orgs. involved in FBED</td>
<td>1</td>
</tr>
<tr>
<td>Creation of capital pools and incentives</td>
<td>2</td>
</tr>
<tr>
<td>Improved regulations that encourages a balanced approach to forest management and sustainable forest practices</td>
<td>3</td>
</tr>
<tr>
<td>Encourage value-added businesses from external as well as within the state and community</td>
<td>3</td>
</tr>
<tr>
<td>Increased personnel at the regional, county and city levels assigned solely to the woods product industry</td>
<td>4</td>
</tr>
<tr>
<td>Better marketing of the region</td>
<td>4</td>
</tr>
<tr>
<td>Using GIS for forest management and locating industrial parks and companies</td>
<td>4</td>
</tr>
<tr>
<td>Increasing efficiency through the use of computer-aided furniture making</td>
<td>4</td>
</tr>
<tr>
<td>Increasing product development</td>
<td>4</td>
</tr>
<tr>
<td>Changing the face of economic development by moving from a strong-back to a strong-mind society through human resource development</td>
<td>4</td>
</tr>
</tbody>
</table>

* Rank (1=Most Frequent → 4=Least Frequent Response)

Table 5: Summary of Sources of Funds for Pursuing FBED Programs in WV

<table>
<thead>
<tr>
<th>Public Sources</th>
<th>Private Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative funds from Federal EDA</td>
<td>Rent from Industrial Parks</td>
</tr>
<tr>
<td>USDA Small Business</td>
<td>Appalachian Regional</td>
</tr>
<tr>
<td>Annual allocation from County</td>
<td>Revolving loans from US Agencies</td>
</tr>
<tr>
<td>WV Legislature (through the WV EDO)</td>
<td>WV Infrastructure and Job Development Council</td>
</tr>
<tr>
<td>US Department of Commerce</td>
<td>HUD Small Cities</td>
</tr>
<tr>
<td>Department of Environmental Protection</td>
<td>Private Investors and Businesses</td>
</tr>
<tr>
<td>Environmental Protection Agency</td>
<td></td>
</tr>
</tbody>
</table>

Staffing: Eighty percent of organizations surveyed claimed to be grossly understaffed, with the increased need for personnel being employed solely for management of the wood products industry in their respective jurisdictions. Additionally, 75 percent of respondents felt that the wood industry in the state was crippled because of out-migration, limited skills and a shrinking entry-level workforce willing to accept the low wages that currently exist.

Vision for FBED Activities in WV over the Next Five Years:

74% of respondents expressed optimism about the future of FBED in WV if appropriate improvement strategies were implemented. Respondents expressed similar themes when asked about their visions for the future of FBED activities in WV. These issues were similar to their recommendations for overcoming the problems and limitations previously mentioned in Table 4. Some of their visions included:

- Diversification of the economy by expanding existing facilities and creating higher quality jobs through the use of more technology in the wood industry.

- Changes in issues such as environmental regulation and regulatory policy in order to foster increased economic development through FBED activities; these changes should be more forest-producer friendly and should encourage ‘best-management’ practices for forest management and sustainability, rather than be as restrictive as they currently are.

- Improvements in legislation for the prevention of the ‘brain-drain’ and out-migration in WV.
- Improvements in legislation for improved public financing of economic development activities and for the improvement of infrastructure development.

- Overcome the perception ‘that trees and the forest is not a crop’.

- Increased legislation for the improvement of tax incentives for local, regional and international wood companies being recruited to the area. These legislative improvements must be in tandem with improved marketing campaigns in order to be highly effective.

- Development of large cooperatives in the wood industry for purchase of inputs and sale of outputs.

- Inclusion of ‘quality of life’ issues in the development plans of organizations, while changing from a strong-back to a strong-mind society through Human Resource Development efforts.

Workers’ compensation rates remain a serious threat to encouraging individuals in the industry and would have to be amended for the industry to enhance its contribution to economic development in the state. Additionally, TMDL will have a major adverse effect on the industry; respondents predict that if is allowed to pass, the future for the wood industry may be negatively affected.

Respondents stated that 65% of the persons currently involved in the wood industry are focusing development efforts on primary production. While respondents see primary production as essential for taking the country forward, they envision more attention being emphasized on value-added development activities and more in-depth research. 72% of respondents believe that local control, visionary planning (preparing for future rather reacting to present) and quality of life are inimical to the forest-based economic development process.

**DISCUSSION AND CONCLUSION**

WV is well poised to reap major benefits from FBED activities because of its dense natural forests. Further, is ideally located for enhanced economic growth through FBED activities because it serves as a center of commerce with three major cities (Baltimore, Pittsburgh and Washington D.C.) in addition to being in close proximity to waterways, interstates and highways. An analysis of the strategies pursued by organizations involved in FBED activities as well as the impact of these activities on rural communities can help specify resources, constraints and suggestions, thereby increasing the accuracy and relevance of forest-based economic development prescriptions. Further, such information can aid in the development of appropriate economic activities and in the planning of suitable business investment opportunities for forest-dependent communities.

The more successful FBED strategy in WV appears to be ‘chasing and acquisition’ of companies to fill industrial parks. Some ‘self-improvement and competitiveness’ are apparent but restricted to primary production of lumber and low-to-medium value added processes. These strategies have led to creation and retention of job as well as the recruitment of local, regional and international wood companies in the rural community. In order to augment economic development in the region, value-added activities and product development must be enhanced to keep profits within the state. Such a strategy should target local companies and entrepreneurs, rather than external recruitment, so as to enhance development from within.

There is a diverse source of funds for FBED activities, both public and private, but these sources are limited, inconsistent and untimely. Additionally, small businesses and entrepreneurs are limited in the ability to secure capital for funding their FBED activities. In order to continue impacting economic development through FBED activities, and in order to encourage contributions by small businesses and entrepreneurs, there is need for improvements in legislation and capital availability for this purpose.

The ‘new forest management paradigm’ as forwarded by Kimmins (1995) appears to be evident in WV as most respondent identified environmental regulations and forest management practices as major concern in their organizations. Improving environmental regulations, enhancing management practices and facilitating long-term planning can help improve FBED in WV.

There does appear to be a lack of coordinated effort between the WV Economic Development Office, the Regions, Counties and Cities involved in FBED. There also appears to be a lot of competition among regions and counties for recruitment and location of businesses in the wood industry. More coordination, communication and cooperation among participants...
in the FBED process may lead to more tangible benefits for the state in general.

Efforts to enhance economic development through FBED activities must also focus on legislative improvements for capital availability, workmen’s compensation, infrastructure development, taxation, and incentives to reduce out-migration. The use of improved technology in the wood industry in WV is currently being included in development plans, and must be extended to include the use of Geographical Information Systems and other such initiatives for enhancing efficiency and effectiveness.

The implementation of FBED plans in WV appears to be limited by availability of personnel at the various levels. Outfitting economic development offices with the requisite staff to fulfill the organization’s objectives is an effective way to improve economic development in the state.

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