

I. INTRODUCTION

I.1. Region in Transition

Rural regions across America have experienced dramatic changes in their economic landscapes. The obvious manifestation of this change is the steady decline of manufacturing sector employment through downsizing, outright plant closing, relocation of companies overseas, and reconsolidation of branch operations. Especially rural regions where the traditional manufacturing sectors dominated the economy have been affected by these shifts disproportionately. Although increasing overseas competition and globalization have been seen as the primary triggers in shifting economic dynamics, technological changes further exacerbated the situation in rural areas where basic infrastructures (i.e., information technology, physical infrastructure, human resources) are not up to challenge to make the transition from the traditional manufacturing to the technology-intensive knowledge economy.

For many rural regions, then, the critical issue is to manage this multifaceted transition in a way that (1) strengthens existing businesses, (2) upgrades workforce skills, (3) addresses small business concerns, and (4) upgrades the aging infrastructure. The ultimate goal is to create employment and wealth in these communities. What should these communities do to ensure success on the path of employment and wealth growth?

By looking at the individual county economies in rural America, one thing is clear: many are too small and sparsely populated to overcome current economic difficulties. Furthermore, many have less diverse economies that are dependent on a few manufacturing plants. On the positive side, however, rural economies have a larger share of small and medium-size companies that are considered the seed of innovation and entrepreneurship.

To overcome the difficulties a single rural county faces, two principles have been advanced in economic development literature: (1) the regional approach to economic development and (2) the industrial cluster approach at the regional level. The regional approach requires an economic development strategy at a level that includes a group of counties rather than individual counties. Defined as concentration of industries connected through backward and forward as well as horizontal linkages, such as a common technology and labor pool, the industry cluster approach is seen as a primary force in securing and maintaining a region's competitive advantage. Particularly, the diamond model of Porter (1990) promotes

clustering of successful industries, and once industry clusters are formed, they show a tendency to generate a significant ripple effect throughout the region.¹

Why are regional industrial clusters important? When an industry cluster is identified and promoted at the regional level, it is more likely to promote regional economic competitiveness, resulting in high-paying jobs and wealth. A significant level of investment has been made in this area by the U.S. Economic Development Administration across the United States (www.eda.gov). The cornerstone of this approach is that sound economic development should be based on the existing businesses of the region, by (1) addressing issues the existing businesses are facing, (2) strengthening the supply chain of core businesses through creating synergies among suppliers, customers, and related industries, (3) identifying and upgrading the skill needs of the workforce employed by the existing businesses, and (4) establishing synergies between the businesses and research and training institutions.

Furthermore, while overseas competition and globalization are causing significant job losses in rural regions, increasing transportation costs due to high fuel costs and just-in-time delivery requirements in certain manufacturing companies create a countertrend such that consolidating the supply chain at the regional level and pursuing import substitution policies can spur innovation, employment, and wealth growth.

Realizing these trends and issues in rural Tennessee counties, Middle Tennessee Industrial Development Association (MTIDA) asked the Business and Economic Research Center (BERC) at the Jennings A. Jones College of Business at the Middle Tennessee State University to perform a comprehensive regional economic analysis to identify target industrial clusters. In this study, the area of focus is called the Middle Tennessee Marketing (MTM) region, which consists of the following 14 counties: Bedford, Coffee, Franklin, Giles, Hickman, Lawrence, Lewis, Lincoln, Marshall, Maury, Moore, Perry, Warren and Wayne.

I.2. Goals

This study aims to address several issues at the regional level to provide a comprehensive roadmap for local and state leaders. Broadly speaking, this study has four major goals:

1. understanding and analyzing regional socioeconomic dynamics;

¹ For a detailed treatment of the issue, see Michael E. Porter, *The Competitive Advantage of Nations*, New York: Free Press (1990). For subsequent studies and application of the theoretical framework by Porter, see *Cluster of Innovation: Regional Foundations of U.S. Competitiveness*, Council on Competitiveness, and "The Economic Performance of Regions," *Regional Studies*, 37 (6&7) (2003).

2. identifying regional industrial clusters;
3. identifying and analyzing target industries; and
4. developing an actionable roadmap for policymakers at the regional and state level.

I.3. Research Questions

In understanding and analyzing regional socioeconomic dynamics and target industrial clusters, we seek answers to the following major questions throughout this study:

1. What are the socioeconomic trends in the region?
2. What is the available workforce in the region?
3. How diverse is the region's economy?
4. What are the major strengths and weaknesses of the region?
5. How does the region meet business needs?
6. What are the prevalent business attitudes in the region?
7. What are the primary reasons for the manufacturing employment loss in Tennessee?
8. What are the regional industrial clusters?
9. How are the target clusters identified?
10. What are the target clusters?
11. What needs to be done for a successful cluster development strategy?

I.4. Organization of the Rest of the Paper

The rest of the paper is organized as follows:

Chapter II provides a general conceptual framework, methods of inquiry, and data. *Chapter III* primarily focuses on "understanding and analyzing socioeconomic dynamics" in the region. This chapter has five major sub-sections that deal with (1) socioeconomic dynamics from a comparative perspective, (2) detailed regional dynamics, (3) workforce availability, (4) regional economic vulnerability, and (5) a general assessment of plant closing in Tennessee.

Chapter IV identifies and analyzes regional industrial clusters in the Middle Tennessee Marketing (MTM) region. After a brief literature review and conceptual framework, this chapter introduces data from an input-output model, analyzes stakeholder interview and survey results, and finally provides regional industrial clusters aligned with national cluster templates identified by Fesser (2005).

Chapters V and VI presents the procedures that are used to identify target industrial clusters for the region. After presenting performance-based cluster rankings, these chapters introduce a detailed view of target industrial clusters at the regional level.

Chapter VII concludes the study with policy recommendations. *Chapters VIII and IX* present data sources and appendices that include major study presentations, respectively.